

# ARMY AND NAVY JOURNAL.

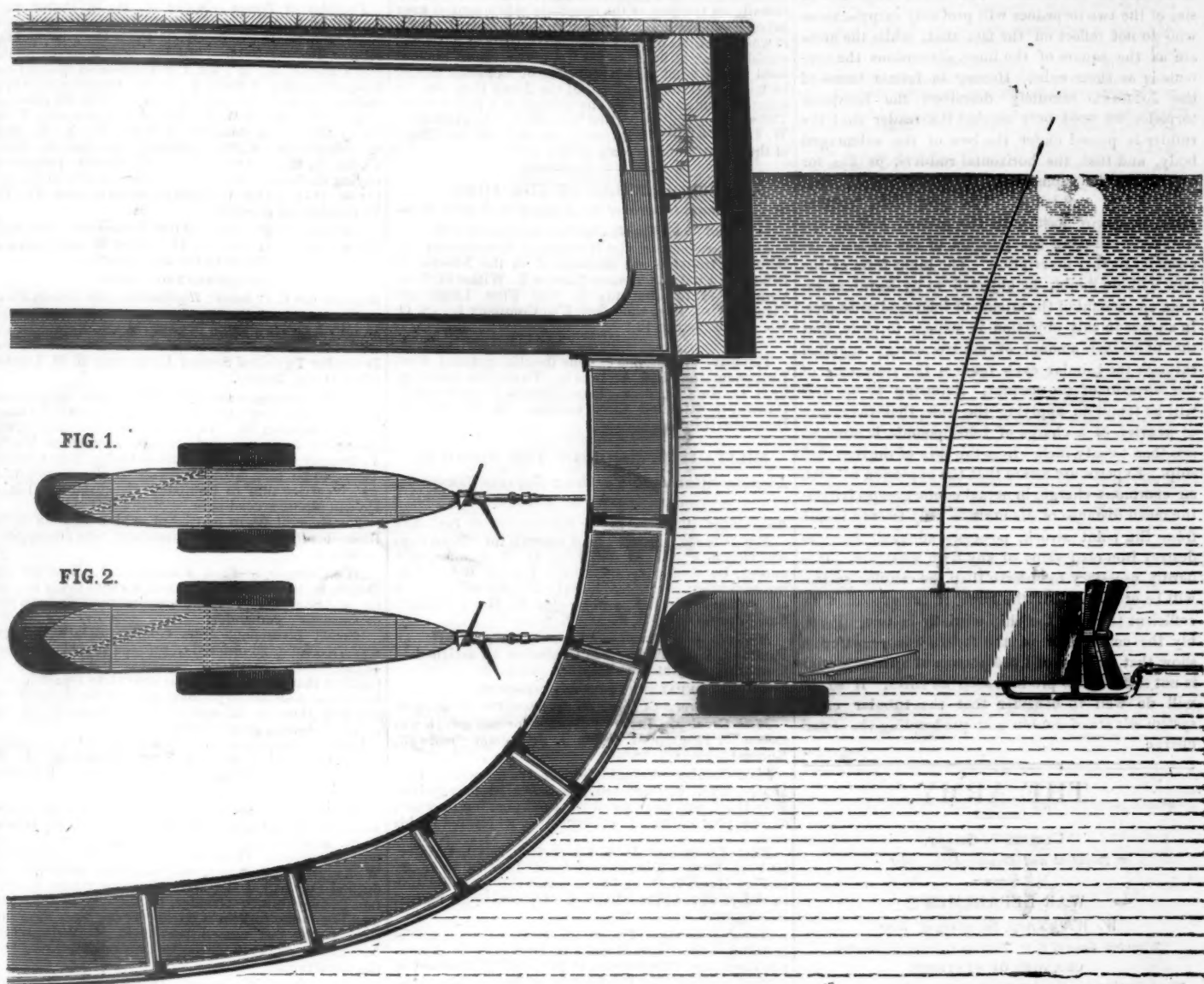
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## CAPTAIN ERICSSON'S AGGRESSIVE TORPEDO.

SCALE ONE-QUARTER OF AN INCH TO THE FOOT.



### AGGRESSIVE TORPEDOES.

It appears from the particulars published in the JOURNAL, November 28, regarding the WHITEHEAD Torpedo, that its constructor has recently modified his system in order to attain a very high rate of speed—the only possible expedient by which the disadvantage of not possessing any directing power, can be, to some extent, met. Obviously the deviation from the intended course resulting from currents and other disturbing causes, after pushing out the torpedo, will be diminished in the inverse ratio of the speed of the submerged body. And, of course, the chance to strike an antagonist in motion, will be greater in proportion to the increased speed of the torpedo. But, unfortunately, great speed cannot be produced without resorting to such a form that the efficiency of the weapon will be seriously impaired, if not destroyed. Bearing in mind that the power necessary for propulsion increases as the cube of the velocity, we need not be surprised to find that the length of the improved "fish" torpedo has been augmented to 19 feet, while the diameter has been reduced to fifteen inches. Nothing short of such disproportion of length and diameter, admits of lines sufficiently sharp to enable a submerged body to be propelled at the extraordinary rate of speed which, agreeable to the reports of our officers on the Austrian coast, has recently been attained by the WHITEHEAD torpedo. Nor could such speed be produced, notwithstanding the sharp lines employed and the consequent sacrifice of necessary capacity, unless the submerged body were charged with compress air

of a tension which experienced engineers regard as dangerous. Recent accidents in Europe prove that an expansive force of one thousand pounds to the square inch, now employed by WHITEHEAD, is not safe even for experimental purposes. But let us assume that workmanship and materials have arrived at such a state of perfection that we may safely handle the "fish" whose skin, agreeable to reports forwarded to the Bureau of Ordnance, is only one-eighth of an inch thick, and whose interior is charged with air exerting a pressure of 1,000 pounds to the square inch. The important question then presents itself: will the new instrument prove sufficiently destructive to sink a modern iron-clad ship? The reports referred to state, that the explosive charge of the Austrian torpedo consists of 66 pounds of gun powder placed, of course, in the forward end of the body where, owing to its pointed form, the charge will occupy a length of nearly four feet. Hence, as the force of explosive substances contained in elongated vessels, acts at right angles to the longest axis, it will be evident that the force of the long, taper, conical charge of the improved WHITEHEAD torpedo—supposing that it strikes fair—will be exerted in lines nearly parallel to the skin of the vessel struck. Apart from this grave circumstance, the fact should be considered that, the charge is of conical form and that therefore the distance of the centre of gravity of one-half of its mass is situated only one-sixth of its length from the base. Consequently, at the moment of ignition, fully one half of the explosive energy will be wasted by expansion into the empty body of the torpedo, while the other half, acting at right

angles to the axis of the torpedo, will as before stated exert its force in lines nearly parallel to the ship's side and thus become partially harmless. Again, the portion of the charge near the apex of the cone though in contact with the body struck, is too small in volume to exert destructive force.

The foregoing considerations point to the fact that the expedient of making aggressive torpedoes long, slender and pointed, in order to attain high speed in spite of the limited amount of motive energy which can be stored within their contracted bodies, is incompatible with destructive efficiency. No system which does not admit of carrying a very heavy explosive charge of such a form that the centre of gravity of the same is nearly equi-distant from its outer limits, will prove adequate to destroy iron-clads constructed on the admirable cellular plan of the *Invincible*. Unless, therefore, some new motive agent can be procured many times more powerful for the space it occupies, than atmospheric air compressed, the tubular cable system must be resorted to, since that enables us to propel a body of sufficient capacity to carry an explosive charge of sufficient magnitude. Nor should the all important fact be lost sight of that the tubular cable system enables us to control and direct the course of the torpedo. Regarding the proper form and size of the vessel which contains the explosive charge, we need hardly observe that hitherto that subject has received too little attention.

The reader will find in the illustration which we give above, prepared from a drawing which Captain ERICSSON has furnished to enable us to discuss the



question of form and magnitude of charge, without entering into an elaborate disquisition. The section of the ship represented which the aggressive torpedo is supposed to strike, will readily be recognised as that of the British iron-clad *Devastation*. Fig. 1 shows the top view of a torpedo carrying a charge of 400 lbs. of nitro-glycerine. Fig. 2 shows the top view of another torpedo of nearly similar form carrying a charge of 1,000 pounds of the same explosive substance as the former. The slight difference in size of the two torpedoes will probably surprise those who do not reflect on the fact that, while the areas are as the square of the lineal dimensions the contents is as their cube. Having in former issues of the JOURNAL minutely described the ERICSSON torpedo, we need only remind the reader that the rudder is placed under the bow of the submerged body, and that the horizontal rudders, or fins, for regulating the submersion, are placed one on each side, nearly amidships. The propellers, tubular cable, and wire-mast with the colored ball at the top, for indicating the position of the torpedo, require no further description. The blunt form of the bow will, no doubt, be objected to by Naval architects on account of the attendant increased resistance. In answer to this objection it suffices to state, that the unlimited amount of motive energy supplied through the tubular cable renders the resistance of the torpedo of no account. Referring to fig. 2, it will be found on applying the scale, that the centre of gravity of a charge of 1,000 pounds is situated less than twenty inches from the skin of the iron-clad ship. Experts are aware that the explosion of such an enormous charge, in actual contact, especially as the mean distance of its mass is only twenty inches from the point struck, possesses adequate force to destroy iron-clad ships of any form whatever. It is hardly necessary to observe that the cellular system will be of no avail if the force of the explosion be sufficient to break the ship partially in two. Possibly the constructor of the *Inflexible* is prepared to show that a charge of 1,000 pounds of nitro-glycerine is not sufficient to produce such an effect. If so, he will do well to consider that the tubular cable system admits of doubling or quadrupling the stated charge.

## THE ARMY.

ULYSSES S. GRANT,  
President and Commander-in-Chief

### WAR DEPARTMENT.

W. W. Belknap, Secretary of War.

Brigadier-General E. D. Townsend, Adjutant-General.

#### CHANGES OF STATIONS.

The following are the changes of stations of troops reported to the Adjutant-General's Office during the week ending Saturday, December 19:

- Company E, Seventh Cavalry, from Greensboro, Ala., to Opelika, Ala.
- Company H, First Artillery, from Hamburg, S. C. to Charleston, S. C.
- Company D, Second Artillery, from Barnwell, S. C., to Charleston, S. C.
- Company H, Second Infantry, from Enfauila, Ala., to Mobile, Ala.
- Company C, Ninth Infantry, from Omaha Barracks, Neb., to Fort Hartsuff, Neb.
- Company A, Eighteenth Infantry, from Opelika, Ala., to Atlanta, Ga.

POSTS ESTABLISHED.—Fort Hartsuff, Neb.  
POSTS DISCONTINUED.—Greensboro and Enfauila, Ala.; Hamburg and Barnwell, S. C.

#### GENERAL COURT-MARTIAL ORDERS.

G. C.-M. O. No. 83, Washington, Nov. 23, 1874.—Before a General Court-martial which convened at Camp Douglas, U. T., October 22, 1874, pursuant to S. O. No. 152, October 14, and No. 154, October 17, 1874, headquarters Department of the Platte, Omaha, Neb., and of which Colonel J. J. Reynolds, Third Cavalry, is president, was arraigned and tried: Captain George W. Dost, Fourteenth Infantry. Charge I—"Conduct unbecoming an officer and a gentleman, in violation of the 83d article of War." The specifications alleged that on the 5th and 6th days of June, 1874, while in full dress uniform he appeared at a Cheyenne theatre, drunk, and with women of ill repute, and behaved scandalously; that he publicly came out of a house of prostitution there in like condition. Charge II—"Neglect of duty in violation of the 44th Article of War." The specifications alleged failure to appear at dress parade at the time fixed until sent for, though not ill; that being on duty as officer of the day, he failed to attend and to report result of retreat roll-call (September 23). Charge III—"Drunk on duty, in violation of the 45th Article of War." This September 28. Found guilty and sentenced "To be cashiered."

The proceedings, the findings, excepting that upon the first charge, and the sentence are confirmed. Under

the first four specifications the prisoner is convicted of grossly indecent behavior in public, and yet the court acquit him of any violation of the 83d Article of War. The chief end and aim of this article is only to maintain a correct rule of gentleman-like conduct among officers of the Army, and with this view to provide for expulsion from the service of any who may be guilty of such disgraceful or scandalous offences against decency as those set forth in these specifications. For the more flagrant crimes that are the common subject of all penal codes, there are other and more severe punitive provisions in the Articles of War as well. But could the idea implied—though doubtless unintentionally on the part of the court—in this acquittal ever become general in the Army, then that standard, which it was the object of the enactment of the 83d Article to establish, might be so much let down as to make it hard to say what better propriety of behavior should be required from an officer, of the Army than can be exacted from anybody by the process of a police court. The sentence will be carried into effect. Captain Geo. W. Dost, Fourteenth Infantry, ceases to be an officer of the Army from the date of this order.

#### HEADQUARTERS OF THE ARMY.

W. T. Sherman, General of the Army of the United States

Colonel W. D. Whipple, Assistant Adjutant-General.

At the request of the Regimental Commander the following transfers are announced in the Nineteenth Infantry: First Lieutenant Charles T. Witherill, from Company I to Company E, vice First Lieutenant Placidus Ord, from Company E to Company I. (S. O. No. 58, December 12.)

The leave of absence for one month, granted First Lieutenant Jonathan A. Yeckly, Twentieth Infantry, by S. O. No. 249, c. s., Headquarters Department of Dakota, is extended three months. (S. O. No. 59, December 16.)

#### MILITARY DIVISION OF THE MISSOURI.

Lieutenant-Gen. P. H. Sheridan: Hdq'r's Chicago, Ill.

##### DEPARTMENT OF DAKOTA.

Brig.-General Alfred H. Terry: Headquarters, St. Paul, Minn.  
Pay Department.—Leave of absence for fifteen days was December 14 granted Major G. W. Candee, paymaster, U. S. Army (Sioux City, Iowa). Before taking advantage of this leave, Major Candee will transfer all public funds in his possession to Major: William Smith, paymaster, U. S. Army.

Medical Department.—Assistant Surgeon H. O. Paulding, U. S. Army, was December 14 assigned to temporary duty at Fort Snelling, Minn.

##### DEPARTMENT OF THE MISSOURI.

Brigadier-General John Pope: Headquarters, Fort Leavenworth.  
Fifth Cavalry.—Leave of absence for one month was December 12 granted Major J. J. Upham (Caldwell, Kansas).

Sixth Cavalry.—Captain John A. Irwin, now at Fort Dodge, Kas., was ordered December 16 to repair to Fort Hays, and there await the promulgation in orders of the proceedings of a General Court-martial in his case.

First Lieutenant J. W. Chickering, Sixth Cavalry, at Fort Dodge, Kas., was ordered Dec. 18 to repair to Fort Hays, Kas., and there await the promulgation in orders of the proceedings of a General Court-martial in his case.

Board of Survey.—The attention of post commanders is called to the constant and vexatious delay in accomplishment and transmission of proceedings of Board of Survey convened for the purpose of ascertaining damage, deficiency or loss in supplies received by trains. It is known that the delay is often due to carelessness or neglect upon the part of the officer whose duty it becomes to record the proceedings, than to any legitimate cause. Hereafter when a Board of Survey is convened at a military post in this District, if, after the expiration of a week, the proceedings have not been fully accomplished and transmitted to the post adjutant, the post commander will call for an explanation, and will see that it is satisfactory in justification of the delay, or hold the officer concerned, responsible therefor. He will further, himself, review the proceedings before approving or transmitting them and will see, "That the Tabular Statements are appended when required: That the responsibility for loss, damage, or deficiency, is definitely fixed when the facts are accessible: That the price of articles lost, damage, or found deficient, is stated in the proceedings when the proper data can be obtained: That when the Board recommends, that either a receiving or invoicing officer be authorized to drop articles invoiced, the recommendation is in accordance with last orders or instructions from department headquarters referring thereto: That the number of the train and the number of wagons comprising it be distinctly stated, and if the carrier has been held responsible for loss, damage, or deficiency, that the proceedings show he has been heard, through himself or agent: And finally that the proceedings are properly dated, signed, accomplished and transmitted to the parties prescribed in orders." Cause of absence of members detailed will be appended to the proceedings, and cause of delay beyond the time authorized will be endorsed thereon by the post commander. Pending accomplishment of proceedings, officers detailed on Boards of Survey should not be granted leave of absence, unless the delay arises from causes beyond their control. The foregoing instructions are not intended to change or modify existing orders in relation to Boards of Survey. They are simply intended to obviate delay, and if practicable, to insure the correctness of proceedings before approval and transmission.

Nineteenth Infantry.—First Lieutenant John G.

Leefe, R. Q. M., was December 18 relieved from duty as acting assistant quartermaster for the board of officers convened for the purchase of cavalry horses, and will return forthwith to Fort Lyon, C. T., where he will resume his duties. In addition to his duties as acting assistant quartermaster at Fort Lyon, C. T., Lieutenant Lee will perform the duties of Captain W. T. Howell, A. Q. M., U. S. Army, at West Las Animas, C. T. Captain Howell, A. Q. M., U. S. Army, will repair to department headquarters, without delay, and report, in person, for duty as quartermaster of the board of officers convened for the purchase of cavalry horses.

Payment of Troops.—Major J. B. M. Potter, paymaster, U. S. Army, was ordered December 18 to proceed from Santa Fe, N. M., to Forts Craig, Tularosa, McIntae, Bayard, Selden, Stanton, and Wingate, and to Ojo Caliente, N. M., for the purpose of paying the troops stationed at those points to December 31, 1874, making his first payments as soon after the 3d proximo as possible. Major W. H. Johnston, paymaster, U. S. Army, the troops stationed at Santa Fe, N. M., and, on completion of this payment, proceed to Forts Union, N. M., and Garland, C. T., for the purpose of paying the troops stationed at those points to December 31, 1874, making his first payment as soon after the 3d proximo as possible.

Ordnance Department.—First Lieutenant Almon L. Varney, U. S. Army, was December 12 announced as chief ordnance officer of the department.

##### DEPARTMENT OF TEXAS.

Brigadier-Gen. C. C. Auger: Headquarters, San Antonio, Texas.

Twenty-fifth Infantry.—Leave of absence for one month, with permission to apply to the Adjutant-General of the Army for an extension of five months, was December 7 granted Second Lieutenant H. H. Landon (Fort Davis, Texas).

Tenth Infantry.—In compliance with instructions from the War Department, Adjutant-General's Office, dated November 28, 1874, the following promotion was December 5 pronounced: Second Lieutenant Walter T. Duggan, Company A, Tenth Infantry, Fort Concho, Texas, to be first lieutenant vice Hoffman, resigned, which carries him to Company D, at Austin, Texas. He will report accordingly.

The General Court-martial of which Captain E. G. Bush, Tenth Infantry, was president, was December 5 dissolved.

Ninth Cavalry.—First Lieutenant I. M. Starr was December 10 ordered to proceed without delay to Dallas and Sherman, Texas, under instructions from the department commander.

Second Lieutenant John Conline, Ninth Cavalry, was December 26 ordered to proceed to San Antonio, Texas, in charge of the means of transportation en route to that place. Upon his arrival, to report in person to the assistant adjutant-general of the department, and will then be allowed to take advantage of the leave of absence granted him.

Leave of absence on surgeon's certificate of disability was December 3 granted First Lieutenant M. B. Hughes, Ninth Cavalry, for one month. (Fort Sill, I. T.)

Medical Department.—Leave of absence for one month was December 2 granted A. A. Surgeon G. W. Hatch, U. S. Army, when his services can be spared by the post commander. (Fort Sill, I. T.); A. A. Surgeon C. W. Knight, U. S. Army, was same date relieved from duty at Fort Sill, I. T., and ordered to report to Captain Cooney, Ninth Cavalry, to accompany the command en route to Fort Concho, Texas, and, after arrival at the last named post, will proceed to San Antonio, to report in person to the medical director of the department.

Colonel Buell's Command.—December 3, Lieutenant-Colonel Buell, Eleventh Infantry, was ordered upon his return to his supply camp on north fork of Red river, to turn over to Major Morrow, Ninth Cavalry, ten of his best six-mule teams, and 20 days supplies, and seven Indian scouts, under Lieutenant Smith, Ninth Cavalry. He will order Morrison's company (E) to Fort Richardson, direct, by easy marches, and with the balance of his command will proceed to Fort Griffin, direct, by easy marches. On his arrival at the post, he will order Captain Nolan, with his company (A, Tenth Cavalry), to return to Fort Concho. As soon after his return he can dispense with his services, Lieutenant-Colonel Buell will relieve Lieutenant Turner, Tenth Cavalry, from duty with his command and order him to join his company. A. A. Surgeon Culver will also be relieved and ordered to duty with Major Morrow's command.

#### MILITARY DIVISION OF THE SOUTH.

Major-General I. McDowell: Hdq'r's, Louisville, Ky.

##### DEPARTMENT OF THE SOUTH.

Major-General I. McDowell: Headquarters, Louisville, Kentucky

Seventh Cavalry.—Captain Frederick W. Benteen was December 14 relieved from duty as a member of a board of officers previously constituted.

Sixteenth Infantry.—Second Lieutenant George M. Love was December 15 ordered to proceed to Humboldt, Tenn., and report to the commanding officer of that post for temporary duty. When his services are no longer required he will return to his proper station, Lebanon, Ky.

Seventh Infantry.—Leave of absence for one month was December 14 granted Second Lieutenant Charles A. Varnum (Livingston, Ala.), to take effect when his services can be spared by his post commander.

Second Artillery.—First Lieutenant John H. Gifford was December 14 ordered to proceed to Raleigh, N. C., and report to the commanding officer of that post for duty with his company (I).

First Lieutenant G. Mitchell, Second Artillery, Barn-



well, S. C., was ordered December 14 to return with his company (D) to Charleston, S. C.

**First Artillery.**—Captain W. L. Haskin, Hamburg, S. C., was ordered December 12 to return with his company (H) Charleston, S. C.

Official information has been received from the War Department of the following promotion of an officer of the First Artillery: Second Lieutenant Robert H. Patterson, Battery K, Charleston, S. C., to be first lieutenant, vice Eakin, promoted, which carries him to Company A, Fort Barrancas, Fla. Lieutenant Patterson, will remain on duty with Battery K, until his tour of two years service is completed.

**Medical Department.**—Hospital Steward Hugh H. Lyons, U. S. Army, was December 12 assigned to duty in the office of the medical director of the department.

**Fifteenth Infantry.**—Leave of absence for twenty days was December 12 granted Captain Edgar R. Kellogg (Opelika, Ala.)

**Independent Posts.**—The post of Livingston, Alabama, and of Opelika, Alabama, after it is garrisoned by the company of the Seventh Cavalry, will be considered as independent posts, and will report direct to department headquarters.

#### DEPARTMENT OF THE GULF.

Colonel W. H. Emory: Headquarters, New Orleans, La.

**Medical Department.**—Leave of absence for one month was December 16 granted Assistant Surgeon R. H. White, U. S. Army (New Orleans, La.); A. A. Surgeon E. Lauderdale, U. S. Army, was same date relieved from duty at Jackson Barracks, La., by the 20th of December, and, upon being so relieved, to report to the commanding officer, troops in New Orleans, for duty.

The leave of absence granted A. A. Surgeon William Deal, U. S. Army, on condition that he provide suitable medical attendance during the absence, was December 14 extended to include the 31st instant, on the same conditions.

**Sixteenth Infantry.**—Captain W. H. Bartholomew was December 15 relieved from duty as member of a General Court-martial, and Assistant Surgeon R. S. Vickery, Medical Department, detailed as a member of the court. First Lieutenant Stephen K. Mahon, was same date ordered to relieve in person at the office of the Adjutant-General of the Army.

**New Orleans.**—A General Court-martial was constituted to meet at the Continental Hotel in New Orleans, December 8. Detail for the court: Captains E. W. Clift, P. H. Ellis, Thirteenth Infantry; First Lieutenants William Conway, C. C. Cusick, Twenty-second Infantry; Second Lieutenants M. F. Jamar, Thirteenth Infantry; E. W. Casey, Twenty-second Infantry; J. H. H. Peshine, Thirteenth Infantry. Second Lieutenant B. H. Gilman, Thirteenth Infantry, judge-advocate.

#### MILITARY DIVISION OF THE ATLANTIC.

Major-General W. S. Hancock: Headquarters, New York.

**Officers Registered.**—The following officers were registered at headquarters Military Division of the Atlantic, for the week ending December 22, 1874: Second Lieutenant S. N. Holmes, Thirteenth Infantry; Captain John H. Donovan, Seventeenth Infantry; First Lieutenant W. B. Beck and Captain H. F. Brewerton, Fifth Artillery; Lieutenant-Colonel W. R. Shafter, Twenty-fourth Infantry; First Lieutenants Jas. A. Haughey, F. H. E. Ebstein, Twenty-first Infantry; Major G. A. Gordon, Fifth Cavalry.

**Fifth Artillery.**—Leave of absence for twenty-one days, to date from the 21st instant, was December 17 granted Captain Richard Arnold (Plattsburg Barracks, New York).

**Third Artillery.**—Leave of absence for twenty days was December 17 granted Second Lieutenant Charles A. H. McCauley (Fort Wadsworth, N. Y. H.)

**Fort Trumbull.**—A General Court-martial was appointed to meet at Fort Trumbull, Conn., December 21. Surgeon Alexander B. Hason, Medical Department, and the following officers of the Fifth Artillery were detailed for the court: Lieutenant-Colonel Frederick T. Dent; Captain Francis L. Guenther; First Lieutenants Joseph Keefe, Selden A. Day, Thomas R. Adams. First Lieutenant Ocran H. Howard, judge-advocate.

#### MILITARY DIVISION OF THE PACIFIC.

Major-Gen. J. M. Schofield: Headquarters San Francisco, Cal.

**Medical Department.**—A. A. Surgeon R. E. Lightburne, U. S. Army, was November 30 ordered to return to his station, Camp Verde, A. T., by the next steamer for the Colorado river. A. A. Surgeon George Gwyther, U. S. Army, was ordered same date to report to First Lieutenant John A. Lundeen, Fourth Artillery, for duty with troops en route to Alaska Territory, and on arrival at Fort Wrangle to report for duty to the commanding officer of the detachment of troops at that post.

**First Cavalry.**—Recruiting for the Army having been resumed, a rendezvous was December 1 ordered to be re-opened at Sacramento, Cal., by Captain George B. Sanford, who is detailed as the recruiting officer in that city.

**Twenty-first Infantry.**—Second Lieutenant Charles E. S. Wood was ordered November 27 to proceed to Camp Bidwell, Cal., without delay.

**King Kalakaua.**—Brevet Colonel Wm. M. Wherry, aide-de-camp, was ordered December 3 to report to His Majesty, the King of the Hawaiian Islands, as aide-de-camp, to accompany him to Washington City, where on arrival he will report to the Adjutant-General for instructions. Upon completion of the duty on which he is sent, he will return to his station in San Francisco.

**Fourth Artillery.**—A detachment of troops was ordered to Sitka, Alaska, and Portland, Oregon, in charge of First Lieutenant John A. Lundeen, to proceed by the steamer of the 11th of December.

Second Lieutenant Montgomery M. Macomb, Fourth Artillery, was ordered December 7 to report to First Lieutenant John A. Lundeen, for duty with his command in Alaska Territory.

**Reservation.**—The tract of land herein described, near the town of Carlin, Nevada, having been reserved by the President for military purposes, under date of November 9, 1874, the reservation is hereby announced for the information of all concerned.

**Piny Department.**—The leave of absence for one month granted Major David Taylor, paymaster, U. S. Army, was December 11 extended one month.

**Twelfth Infantry.**—Leave of absence for two months was November 21 granted Major Henry R. Mizner, with permission to go beyond the limits of the Military Division of the Pacific, and apply to the Adjutant-General for an extension of four months. This leave will take effect so soon as Captain Richard C. Parker, Twelfth Infantry, reports for duty at Camp Gaston, California.

The leave of absence for one month granted Second Lieutenant Henry L. Haskell, Twelfth Infantry, headquarters Department of Arizona, November 9, 1874, was December 7 extended one month.

Leave of absence for two months was November 17 granted Captain William E. Dove, Twelfth Infantry, with permission to go beyond the limits of this Military Division, and apply to the Adjutant-General for an extension of four months.

#### DEPARTMENT OF CALIFORNIA.

**Medical Department.**—Hospital Steward George Belding, U. S. Army, was December 7 assigned to duty at Camp Independence, Cal., the post at which he is now serving.

Assistant Surgeon Bernard G. Semig, U. S. Army, was December 11 assigned to duty at Camp Halleck, Nevada, and ordered to report to the commanding officer of that post, relieving A. A. Surgeon Edward E. W. Corson, U. S. Army, of his duties at that post, the latter to report in person to the medical director at department headquarters for annulment of his contract as A. A. Surgeon; Surgeon George E. Cooper, U. S. Army, was same date relieved from duty at Benicia Barracks, Cal., and ordered to report for duty to the commanding officer of Point San José, relieving Assistant Surgeon Edwin Bentley, U. S. Army, of his duties at that post, the latter to report to the medical director at department headquarters for duty.

#### DEPARTMENT OF THE COLUMBIA.

Brig.-Gen. Oliver O. Howard: Headquarters, Portland, Oregon.

**First Cavalry.**—To carry out the requirements of G. O. No. 45, c. s., from the War Department, the following instructions are issued: Post commanders will make bi-monthly inspections of accounts of disbursing officers under their command, and forward reports to the Inspector-General at department headquarters. The inspection of accounts of disbursing officers on duty at department headquarters and at Vancouver, will be made by Captain E. V. Sumner, in charge Inspector-General's Office.

**Twenty-first Infantry.**—The General Court-martial of which Colonel Alfred Sully, was president, was December 3 dissolved.

#### DEPARTMENT OF ARIZONA.

Brigadier-General George Crook: Headquarters, Prescott, A. T.

**Camp Lowell.**—A General Court-martial was constituted to assemble at Camp Lowell, A. T., December 10. Detail for the court: Captains John N. Andrews, Clarence M. Bailey, Eighth Infantry; J. B. Girard, assistant surgeon; First Lieutenants Frank T. Adams, James W. Powell, Eighth Infantry; W. C. Forbush, Charles H. Rockwell, and Second Lieutenant Charles H. Watts, Fifth Cavalry. Second Lieutenant W. L. Pitcher, Eighth Infantry, judge-advocate.

**Pay Department.**—Leave of absence for one month was December 10 granted Major D. Taylor, paymaster, with permission to apply to the proper authority for an extension of one month. (Station: Tucson, A. T.); Major D. Taylor to proceed to San Francisco, Cal., and on his arrival, turn over to the chief paymaster of the department, all public funds for which he is accountable.

**Fifth Cavalry.**—Major W. B. Royall was ordered to report in person without delay, at department headquarters for temporary duty.

**Eighth Infantry.**—First Lieutenant C. A. Earnest was re-assigned to duty as depot commissary, Yuma Depot, and will relieve Lieutenant Ray in his duties, on the 31st of December. Lieutenant Ray, upon being relieved, will report for duty with his company.

**Medical Department.**—On the 11th November Surgeon D. L. Magruder was ordered to make an inspection of the medical stores in depot at Yuma, and then proceed without delay to department headquarters, are confirmed.

#### NAVY GAZETTE.

##### REGULAR NAVAL SERVICE.

##### ORDERED.

Captain Edward Barrett, to hold himself in readiness for immediate sea service.

DECEMBER 16.—Carpenter Peter T. Ward, to the Navy-yard, Norfolk, Va.

DECEMBER 17.—Lieutenant W. W. Rhodes, to the receiving ship Sabine.

DECEMBER 18.—Lieutenants Wm. H. Jacques and Geo. W. De Long, to the Nautical School Ship St. Mary's.

Lieutenant A. C. McMechan, to the Hydrographic Office.

Gunner James Thayer, to the Naval Experimental Battery, Annapolis, Md.

DECEMBER 19.—Captain K. R. Breese, to duty as inspector of hydrography.

Lieutenant S. C. Paine, to duty connected with the survey of the Isthmus of Darien.

Surgeon Delavan Bloodgood, to the Navy-yard, Pensacola, Fla.

Assistant Engineer G. S. Gates, to the Navy-yard, Portsmouth, N. H.

DECEMBER 21.—Ensign Wm. H. Slack, to temporary duty on board the Powhatan, and upon arrival on the European Station to report for duty on that station.

DECEMBER 22.—Lieutenant-Commander Merrill Miller, to the Naval Academy.

Lieutenant Washburn Maynard, to Washington to submit his report connected with seal fisheries.

##### DETACHED.

DECEMBER 18.—Lieutenant-Commander John C. Kennett, from the Brooklyn on the 29th inst., and granted leave of absence for six months.

Lieutenant-Commander Frederick Pearson, from special ordnance duty, and ordered to the Brooklyn as executive officer on the 29th inst.

Gunner Andrew Harman, from duty at the Naval Experimental Battery at Annapolis, Md., and placed on waiting orders.

DECEMBER 19.—Commander R. L. Law, from the command of the receiving ship Ohio on the 15th January next, and placed on waiting orders.

Surgeon J. H. Tinkham, from the Naval Rendezvous, New York, and placed on waiting orders.

Surgeon J. R. Tryon, from the Navy-yard, Pensacola, Fla., and upon completion of duties connected with the Medical Board at that yard, to return to New York and resume duties at the Naval Rendezvous at that place.

Acting Assistant Surgeon Wm. Houston, from the Colorado on the 5th inst., and placed on waiting orders.

Passed Assistant Engineer T. Cook, from the Navy-yard, Portsmouth, N. H., on the 24th inst., and ordered to the Powhatan on the 30th inst.

Assistant Engineer W. B. Bailey, from the Powhatan on the 30th inst. and ordered to duty in the Bureau of Steam Engineering.

DECEMBER 21.—Lieutenant Wm. H. Emory, from the Coast Survey on the 31st inst., and ordered to temporary duty on board the Powhatan, and on arrival on European Station to report for duty on that station.

Ensign Perrin Bushbee and S. A. Staunton, from the Hydrographic Office, and ordered to the Powhatan, and on arrival on European Station to report for duty on that station.

Ensign Aaron Ward, from the Hydrographic Office, and placed on waiting orders.

Paymaster R. W. Allen has reported his return home having been detached from duty as naval storekeeper at Nagasaki, Japan, on the 9th ult., and has been ordered to settle accounts.

DECEMBER 22.—Surgeon S. D. Kennedy, from the Powhatan, placed on waiting orders.

##### REVOKED.

The orders of Commander George E. Belknap as inspector of hydrography, and ordered to command the receiving ship Ohio on the 15th January next.

##### LEAVE OF ABSENCE GRANTED.

To Assistant Engineer F. C. Burchard for three months, on the expiration of which he will report for examination for promotion.

Francis A. Drue, of Portsmouth, N. H., and Henry P. Grace, of Boston, acting boatswains in the Navy.

##### QUALIFIED FOR PROMOTION.

Assistant Surgeons A. F. Magruder and George H. Torney have been found qualified for promotion to passed assistant surgeons in the Navy.

##### NOMINATIONS TO THE SENATE.

The following naval nominations have been sent to the Senate for confirmation:

Commander George H. Preble to take rank from November 2, 1871, next after Commodore Edward Donaldson, instead of his former date of rank as commodore, in conformity to the act of Congress approved June 23, 1874.

Master Nathan E. Niles to be a lieutenant in the Navy from July 7, 1874, vice Lieutenant Wm. H. Brice, deceased.

Ensign Marcus D. Hyde to be a master in the Navy, from July 7, 1874, vice Master N. E. Niles, nominated for promotion.

Master Lyman G. Spalding to be a lieutenant in the Navy from July 10, 1864, vice Lieutenant-Commander Beatty P. Smith dropped.

Ensign Nathan Sergeant, Jr., to be a master in the Navy from July 10, 1874, vice Master L. G. Spalding, nominated for promotion.

Master Charles P. Perkins to be a lieutenant in the Navy from July 22, 1874, vice Lieutenant Wm. S. Buck, deceased.

Ensign John P. J. Augur to be a master in the Navy from July 22, 1874, vice Master C. P. Perkins, nominated for promotion.

Master Benjamin H. Buckingham to be a lieutenant in the Navy from July 22, 1874, vice Lieutenant Jerome E. Morse, retired.

Ensign Lazarus L. Remy to be a master in the Navy from July 22, 1874, vice Master B. H. Buckingham, nominated for promotion.

Ensign Whitmil P. Ray to be a master in the Navy from August 4, 1874, vice Master Edward M. Day, retired.

Commodore Napoleon Collins to be a rear-admiral in the Navy from August 9, 1874, and promoted under the resolution of Congress, dated July 1, 1870, vice Rear-Admiral John Rodgers, retained on active list by receiving a vote of thanks of Congress.

Captain John C. Feibiger to be a commodore in the Navy from August 9, 1874, vice Commodore Napoleon Collins, nominated for promotion.

Commander E. Randolph Breese to be a captain in the Navy from August 9, 1874, vice Captain J. C. Feibiger, nominated for promotion.

Lieutenant-Commander William T. Sampson to be a commander in the Navy from August 9, 1874, vice Commander K. R. Breese, nominated for promotion.

Master Charles G. Bowman to be a lieutenant in the Navy from August 9, 1874, vice Lieutenant-Commander Wm. T. Sampson, nominated for promotion.

Ensign William H. Wood to be a master in the Navy from August 9, 1874, vice Master C. G. Bowman, nominated for promotion.

Master William P. Potter to be a lieutenant in the Navy from August 9, 1874, vice Lieutenant George J. Mitchell, resigned.

Ensign William P. Souway to be a master in the Navy from August 9, 1874, vice Master Wm. P. Potter, nominated for promotion.

Lieutenant-Commander Alfred T. Snell to be a commander in the Navy from September 19, 1874, vice Commander Charles L. Franklin, deceased.

Master Giles B. Harber to be a lieutenant in the Navy from September 19, 1874, vice Lieutenant-Commander A. T. Snell, nominated for promotion.

Ensign Hanson E. Tyler to be a master in the Navy from September 19, 1874, vice Master G. B. Harber, nominated for promotion.

Captain Peirce Crosby to be a commodore in the Navy from October 3, 1874, vice Commodore Melancthon B. Woolsey, deceased.

Commander Lewis A. Kimberly to be a captain in the Navy from October 3, 1874, vice Captain Peirce Crosby, nominated for promotion.

Lieutenant-Commander George P. Ryan to be a commander in the Navy from October 3, 1874, vice Commander L. A. Kimberly, nominated for promotion.

Master John Garvin to be a lieutenant in the Navy from October 3, 1874, vice Lieutenant-Commander G. P. Ryan, nominated for promotion.

Ensign James H. Ball to be a master in the Navy from October 3, 1874, vice Master John Garvin, nominated for promotion.

[List to be concluded next week.]



## THE UNITED STATES NAVY.

## OUR FLEET MANOEUVRES IN THE BAY OF FLORIDA, AND THE NAVY OF THE FUTURE.

A paper read before the Naval Institute, December 10th, 1874, by Commodore Foxhall A. Parker.

Circumstances having made it necessary for our Government at the commencement of the present year to assemble a fleet in the waters of Florida, the Hon. Secretary of the Navy thought the occasion favorable for the instruction of its officers in the various branches of their profession, and especially in naval tactics, that part of it to which enlightened Europe had given most attention, America and Asia least; and it seemed but reasonable that the author of a theory to be practically tested should be permitted to test it himself, provided he desired so to do, I who had drawn up both the tactics and the tactical signal book, was detailed for this service; and, on the 16th of January reported at Key West, to Rear Admiral Case, as "Chief of Staff of the United Fleets under his command."

It being found that the collective fleet would not be ready for manoeuvring before the 1st of February—some of its vessels ordered from distant stations not having yet reported—the intervening time was passed in boat, great gun, howitzer and infantry exercises; and on the afternoon of the 20th of January a force of seventeen hundred blue jackets and marines was thrown ashore on the South beach of Key West, formed in line of battle and advanced in this order through a dense chaparral to the light-house, distant a half-mile from the landing, whence, after a brigade dress-parade, it was marched in column of companies right in front, to the Government store-house wharf, which had been designated as the place of embarkation. Taking into consideration the fact that at least one-half of the men were greenhorns, recently shipped, the affair was an exceedingly creditable one. There was neither straggling nor drunkenness; and although the irregular swaying of the bayonets on the march, betrayed the recruit, yet the manual of arms and the various changes of formation were executed with a precision and style which reflected the highest credit upon the young drill officers, all of whom, with three or four exceptions, were graduates of the Naval Academy.

The howitzer firing from the boats, however, on this occasion, was neither rapid nor well sustained, nor was the howitzer manipulated aloft as dexterously as it should have been. Ashore it appeared to better advantage, yet neither aloft nor ashore did this truly sailor arm compare favorably with the infantry.

Of the boat exercises in fleet manoeuvres, the less said the better. They were decidedly a failure, and showed clearly how little importance had been attached to the study of fleet tactics by the Navy generally.

On the 31st of January the rear-admiral commanding issued the following general order:

The North Atlantic fleet is hereby separated into divisions as follows:

VAN, OR RIGHT DIVISION.—1. Congress; 2. Ticonderoga; 3. Canandaigua; 4. Fortune.  
CENTRAL DIVISION.—5. Colorado; 6. Wachusett; 7. Shenandoah; 8. Wyoming.  
REAR, OR LEFT DIVISION.—9. Lancaster; 10. Alaska; 11. Kansas; 12. Franklin.

RESERVE DIVISION.—Monitors and torpedo vessels.  
The senior officer of each Division will command it, and will wear a division flag at his mast. He will lead his Division when the right is in front, and bring up the rear with the left in front. He will repeat the Admiral's signals, and when all the vessels of his command have answered his signal, will hoist an answering pennant as an indication to the Admiral that the command is prepared to obey it. When all the Divisional officers have hoisted their answering pennants, and the Admiral is ready, he will haul down his signal; the Divisional officers haul down their signals and answering pennants at the same instant, and the signal is executed.

From the moment of sailing each vessel will keep her distinguishing pennant hoisted until she comes to anchor, when she will haul it down.  
When signal 413—Get Underway—is hoisted with the preparatory over it, and answered in the manner prescribed above, it will be hauled down, when each vessel will hoist in to a short stay, and hoist her distinguishing pennant. So soon as all have their distinguishing pennants flying, signal 412—Get Underway—will be made by the Admiral, and when replied to as above directed, and the Admiral is ready, will be hauled down. All now weigh together.

When signal 334—Anchor—is hoisted, with the preparatory over it, and properly answered, it will be hauled down. At this instant the fleet will slow to three knots.

The Admiral will next hoist signal 335—Anchor—and the moment it is hoisted each vessel will stop her engine without waiting for a signal from Divisional officers, letting go her anchor the moment it is hoisted down.

When the signal is made to "get underway," the fleet will move out in "columns of vessels" with the van leading, unless another formation is signalled.

If not otherwise directed, vessels will "come to" with their starboard anchors.

All courses signalled are magnetic. Tactical signals at night will be made with Coston lights, and the moment of execution denoted by the discharge of a gun.

In conclusion, the Commander-in-chief calls particular attention to the "Explanation," U. S. Navy Signal Book—Naval Tactics, 1874, whose precepts must be rigidly adhered to by Commanding Officers.

A. LUDLOW CASE,

Rear-Admiral, U. S. N.

Commanding U. S. Naval Force, North Atlantic Station.

Flagship Wabash, 1st Rate, Key West, Fla., Jan. 31, 1874.

On the 3d of February, the fleet (the reserve excepted), which had been lying in irregular order off Key West, shifted its berth to the "outer buoy" near Sand Key Light, where it anchored in columns of vessels abreast by divisions, in natural order, heading South, the van division, commanded by Captain Rhind, being on the right. At daylight on the following morning, general signal was made to get underway, and as no formation had been prescribed, and the vessels were then heading S. S. W., the van division moved forward, while the centre and rear divisions obliqued to the right until in the van's wake, when they steered S. S. W., thus forming a column of vessels; which formation the fleet preserved very badly during the day, coming to an anchor at night in line off buoy No. 9, Dry Tortugas, by a movement analogous to the right into line of the army, the vessels heading N. N. W.,

and bearing from each other, reciprocally, E. N. E., and W. S. W., the Congress, flagship of the van division, having anchored first and farthest to the N'nd and E'd.

At eight A. M., on the 5th the fleet weighed, and forming column of vessels, followed the Congress through the passage between the Dry Tortugas and the Rebecca Shoal into Florida Bay. The direction of the head of the column was several times changed during the day, and at six P. M. the signal "Forward into line—left oblique" was made, followed shortly afterwards by the signal, "Anchor!"

On the 6th we moved to the Eastward, and anchored a tug at the distance of twenty-five miles Southeast from Key West, in which vicinity we remained for more than three weeks, in the almost daily exercise of fleet manoeuvres. These consisted of the various line, column and echelon formations laid down in the tactics, and in passing from one to the other, the column varying from single vessel to division front, the echelon being single and double, natural and inverted, and the line either single or double; the fleet moving alternately by the front, flank and rear. After a few days' exercise the various movements were performed with exactness, though with a slowness that was disheartening, since the greatest speed that could be maintained by the fleet as a unit, was four and a half knots an hour.\*

As our anchorage was exposed to winds from the Northwest which during the Winter months sometimes sweep with great violence over the Bay of Florida, the fleet always came to at night in columns of vessels abreast by divisions, heading East, and in this order, on February 9th and 10th it rode out a Northwest gale, without the slightest apprehension being felt on the part of the Commander-in-chief for the safety of any of his command, since being in echelon so long as the wind blew, no vessel could drive on the hawse of another.

On the 20th and 24th insts., the fleet, steaming in column of vessels (close order), at the rate of four knots an hour, was exercised in firing at a target distant eight hundred yards; and, on the 25th some exceedingly interesting experiments were made with spar torpedoes, each vessel exploding one or more of these, filled with from 80 to 150 pounds of powder, under or near a floating raft, constructed of casks and spars.

On the 26th and 27th, the fleet, in columns of vessels, abreast by divisions, was exercised principally in changing direction without altering formation, and on the afternoon of the latter day, the vessels being in column of divisions, with the van leading, and flagships on the left, heading East, and the Admiral desiring to anchor for a few hours for the purpose of communicating with the shore, and afterward to proceed West to the Dry Tortugas, from which direction the tide was then setting, signal was made to the van division—By the left flank! to the centre division—Slow! to the rear division—Forward into line—right oblique! So soon as the rear of the van division was clear of the left of the centre, signals were made to that division—By the right flank! Dress on centre division! By the time these were executed the rear division had gained its place, and the whole fleet being now in line, under the Brooklyn's distinguishing pennant was hoisted 267. "Fleet—from the right and left off—on the vessel whose distinguishing pennant is shown above this signal form double echelon inverted."

The moment this signal came down the wings moved forward simultaneously and formed a right angle with each other, of which the Brooklyn, of course, was the apex.

In this formation the fleet anchored, and swinging head to tide found itself upon weighing anchor at 8 P. M., in double echelon (natural order), with the Brooklyn, carrying her guide lights, leading and steering West. Midway between the two columns on a line with the fifth vessel of each was the Wabash, with her tenders, the Dispatch and Pinta on either quarter.

During the entire night the vessels kept their stations perfectly. Certainly in unity and strength the fleet had gained greatly since the day when it had feebly groped its way out of the harbor of Key West, and at irregular intervals, and in straggling groups, made its way to the islands, whither in perfect order it was now returning.

At 6 A. M. signal was made to the Divisional Commanders to bear up for the anchorage previously assigned to them at the Tortugas, and the fleet manoeuvres here ended.

A week later and the reserve division of monitors was exercised for two days in squadron evolutions, and contrary to what was expected, it manoeuvred admirably, its speed, however, being limited to that which the slowest one of its number could maintain for any length of time, was but four knots an hour.

The distances and intervals of the vessels were remarkably well kept, and all but the Mahopac, which was evidently out of trim, steered well. The wind was light from the S'd and E'd during both days' evolutions, and on the first day the water was smooth. On the morning of the second a heavy sea was rolling in upon the Florida reef, on the outside edge of which we were, but by noon it had subsided to a gentle swell. Table A shows the relative turning power of the monitors moving at the rate of 4½ knots an hour, with light wind and smooth sea; table B their greatest attainable

\* It must be remembered that several of these vessels had been long in commission, and were almost "broken down" in boilers and engines; yet they formed part of a force that did not number one too many for the service that might have been required of it, and their speed could not have been exceeded by the fleet without abandoning them as prizes to the enemy had we been called upon to meet one.

Out of our whole force of wooden and iron vessels not more than eight could have maintained a speed of six and a half knots, and not more than six a speed of eight knots an hour.

The tugs Pinta and Fortune and the little steamer Dispatch are, of course, not included in this summing up. F. A. P.

speed under the most favorable conditions of wind and weather.

TABLE A.				
Names.	Rate.	1000.	Full cir. to stb'd.	Full cir. to port.
Saugus.....	4	550	3 min. 00 sec.	4 min. 00 sec.
Mahattan.....	4	550	6 min. 49 sec.	7 min. 45 sec.
Ajax.....	4	550	7 min. 10 sec.	7 min. 15 sec.
Mahopac.....	4	550	6 min. 49 sec.	7 min. 59 sec.
Dictator.....	2	1750	7 min. 54 sec.	8 min. 30 sec.

TABLE B.			
Names.	Rate.	Tons.	Speed in knots.
Dictator.....	2	1750	10.50
Saugus.....	4	550	6.00
Ajax.....	4	550	5.75
Mahattan.....	4	550	5.50
Mahopac.....	4	550	4.75

And now the "great drill," as the New York Herald has styled our exercises, being ended, what was the lesson it had taught? That a naval force, no matter of what elements composed, possessed but little strength unless properly organized and thoroughly exercised in tactical manoeuvres, every officer who had witnessed our evolutions was willing to admit; but, apart from all this, it became painfully apparent to us that the vessels before us were, in no respect, worthy of a great nation like our own; for what could be more lamentable—what more painful to one who loved his country and his profession than to see a fleet armed with smooth bore guns, requiring close quarters for their development, moving at the rate of four and a half knots an hour? What inferior force could it overtake, or what superior one escape from of any of the great naval powers of the earth? Did it rely, in the latter case, upon its spar torpedoes for defence? What Don Quixote of an admiral was going to run upon them, when, having "the legs" of his adversary, he could concentrate upon his van or rear or upon one of his flanks and, choosing his distance, coolly cut him to pieces with his artillery?

And, in truth, what reliance could be placed upon our torpedo system afloat for either offence or defence?

After many days' preparation seven of the eighteen torpedoes used on the 25th of February had failed to explode, while of those that did explode not more than four were submerged under the target.

If, then, on a beautiful calm day, with nothing to disturb us, such was the result, what would have happened had the fleet, at the time, been exposed to the disturbing influences of an enemy's shot and shell? Take, for example, the Wabash, whose battery consists of forty-four nine-inch guns. Now, while she is approaching an enemy (supposing such a thing possible), with the design of torpedoing him, she will either be using her artillery or not using it.

In the latter case, her enemy, having simply a target to fire at, would riddle her completely and cut all her torpedo gear away before she could get within a hundred yards of him.

In the former, how in the name of practical common sense is the operator at the electric battery amid the confusion and din of battle, and the smoke of his own guns to tell the instant to "close the circuit." For, he has but an instant, remember, and no more. If, however, the object struck is itself to close the circuit, how are you to be assured that, after the melee has once commenced, this object will not be one of your own vessels?

The Franklin, the Colorado, and the Lancaster, leading their respective columns, and the Wabash in the centre of the fleet, looked warlike and formidable indeed, with their powerful batteries, as artillery ships; but with their booms rigged out as torpedo vessels they were simply ridiculous. "But," remarks the torpedo officer of the Wabash, in his official report of March 9th, which is little more than an apology for the many failures of February 25th, "to say that it is useless for these old wooden ships to even try to use torpedoes or have them is, in my opinion, a mistake; for, if they ever can get alongside of vessels of superior force and speed, either by surprising them at anchor in the night or in any other way, they can destroy these vessels with torpedoes when it could be accomplished in no other possible manner."

The plain answer to this is that men-of-war do not suffer themselves to be surprised at night by large bodies moving slowly. The proper way to attack a vessel lying at anchor is with small boats fitted with torpedoes, as Cushing attacked the Albemarle; for if you run at her with your own vessel, and her commanding officer be not a fool, you will probably find yourself journeying toward the stars—long before your pole can be brought into requisition; since in this torpedo warfare on soundings the advantage is decidedly with the defence, and it is not to be supposed that a vessel would remain long at anchor without surrounding herself with floating or submerged torpedoes, or a cordon of boats fitted with torpedoes inside of which it would be impossible for a large vessel to penetrate. Or if without torpedoes her captain might not unwisely follow the example of one of our old officers of farming propensities, who being obliged to remain many weeks at anchor off our southern coast during the civil war quietly fenced himself in and then taking care that the gate of his sea-yard was closed at sunset, he slept peacefully every night undisturbed in the slightest degree by torpedo visions.

The exercise of the torpedo in Florida Bay was of great service to us, however, since for the intelligent use of any weapon it is as important to know what cannot as what can be effected by it. It is one thing to promise great results on paper, and another to obtain them in actual practice, and it is clear to my mind now that, rigged out on a pole attached to a large vessel not possessing very great speed and turning power, the torpedo is alike harmless to friend and foe.

Nevertheless for our long line of sea-board the torpedo is invaluable, and the submarine mine of the engineer supported by forts, and aided as it would be in time of war, by monitors, tugs, and launches has almost hermetically sealed our harbors to a hostile fleet, while a rigid blockade of any of them would be



next to an impossibility, harassed incessantly as the blockading force would be, by improvised rams and torpedo-boats, and by infernal machines of every conceivable device and construction.

It is true that the blockading admiral, supposing him to be a man of energy and resolution, would endeavor to overcome the torpedo with the torpedo, the mine with the countermine; yet, taking in consideration the ingenuity and enterprise of our people, and the disadvantage under which both armies and fleets operate at a distance from their base of supplies, the defeat of the blockades might be relied upon, I think, with almost absolute certainty.

Shall we then, because secure in a great degree from the attacks of hostile fleets upon our shores, conclude with Mr. Boutwell, that ships of war may be dispensed with, and let our vessels rot alongside of decaying wharves?

Is the Great Republic so beloved by all mankind that its citizens are safe in every land and its merchantman on every sea?

We know that such is not the case, and surely all experience should teach us that nothing is so galling to a gallant nation as to be obliged to submit to insult because utterly unprepared to resent it. Unfortunately for the peace-makers, the millennium has not yet come, and whatever may be the indications of it in the heavens above there are none whatever on the earth below. Nation is still rising against nation. Europe is a vast military camp, while the fleets of the great naval powers surpass all that the world has yet seen of mighty armaments upon the deep. Turkey with 15 iron-clads, 44 screw frigates, and a disciplined army is not dead yet; China with her vast horde imports modern artillery and improved rifles; Japan, destined to bear the same relation to Asia that England bears to Europe, has one or more dock-yards and an iron-clad squadron. What, then, is there in the condition of any of the four quarters of the globe to lead to the belief that wars in the future will be less frequent than in the past? At the risk of being accused of intellectual blindness, I emphatically reply, nothing whatever. I am forced, then, to the conviction that, for the maintenance of our national dignity at home and abroad, the protection of our commerce upon the high seas and our citizens in foreign lands, a sea-going fleet is absolutely necessary for us—not a large fleet like that of England, but one which shall be complete in itself, and serve as a safe nucleus to rally around when the hour of trial comes. Let us consider now of what elements this fleet should be composed.

If the object to be kept in view were simply the encountering of a hostile force at sea the ram would alone, in my opinion, suffice for our purpose, fully convinced as I am that, for fleet fighting, it is the most terrible engine of war that a navy can possess. The fire of artillery may be withstood, the contact of the torpedo guarded against; but that there is no withstanding the shock of the steam ram, the battle of *Lissa*, the sinking of the *Cumberland*, and daily collisions on the ocean bear witness. For attacking forts, however, guns must be brought into play and for creeping stealthily upon a large vessel at night, in thick weather, or amid the smoke of battle, there is nothing equal to the low torpedo-boat; consequently to be prepared for all the service that may be expected of it, the fleet of to-morrow must consist of rams, torpedo-boats, and artillery vessels, all of which should be steamers of great speed, having auxiliary sail power, and if not propelled by twin-screws, some mechanical contrivance which enable them to turn short around with celerity; for turning power is essential to every man-of-war, and especially so as to a ram which must always keep her head turned towards the enemy. In storms the dependence of these steamers for safety should be on their engines, and if never required to make sail with the wind forward of the beam their masts might be telescopic (as proposed by Rear-Admiral Boggs, some years since), and their spars and sails so light as to be easily handled and sent below; so that an artillery vessel would have nothing but her lower masts, and a ram and torpedo vessel nothing at all left standing above decks when steaming head to wind or going into action. All that I have said above refers to the fighting vessel. For cutting up an enemy's commerce, ships of the *Alabama* and *Shenandoah* type will be required, having a long-range pivot gun forward, two steam torpedo cutters and a Gatling battery, and every admiral in time of war should be supplied with a number of extraordinarily fast steamers to carry despatches and act as lookouts.

At present our vessels are adapted to the days of Paul Hoste, rather than to the age of steam, loaded down as they are with immense spars and rigging, which, in a general action, would infallibly be shot away and, trailing after them, foul their screws, thus rendering them utterly helpless; for woe be to that vessel, in future naval battles, whose propeller refuses to turn after the melee commences. Not many minutes can elapse before an enemy will be upon her, steaming at full speed, and striking her in a vital part send her to the bottom. It becomes, therefore, all important that the motive power of a steamer should be protected from injury, and certainly nothing could more imperil it than the masts and rigging as at present arranged.

At first sight it might seem a very expensive matter to keep up a purely steam marine, but when the high price now paid for surplus masts, spars, rigging and cordage is deducted from the bill I think it will be found that an efficient steam Navy can be maintained at a cost but little exceeding that of our present non-descript one. I know that our Benbowes of the present day, young as well as old, will cavil at this, for with them not to "talk rope" is not to be a seaman. These men still delight in dissertations upon the hauling down of a jib and the brailing up of a spanker, and dwell fondly upon the legends of the good old times, when, however potent cotton might be on land, flax was certainly king upon the sea; but the great ma-

jority of naval officers are, I am sure, looking forward to a higher order of things, and will agree with me in the opinion that the tar of the past, although a glorious fellow in his day, it would by no means be desirable to resurrect for the Navy of the future.

A ram should be purely a ram, a torpedo boat be restricted to the use of torpedoes, while an artillery vessel, for offence and defence, should place all her reliance upon her battery, not turning out of her way to seek an opportunity for ramming, though not, of course, failing to take advantage of one should it chance to offer.

For the man who has several weapons to choose from may hesitate, in action, which to avail himself of, while he who has but one will be quite sure to use that one effectively.

Whether or not our artillery ships should be iron-clad is a vexatious and much mooted question; but as the duel between iron-plating and artillery has already resulted in favor of the latter, if we may believe the reports of experiments in England and Germany; as powder is still being improved so that, without greater strain upon the gun, it will exert more force upon the projectile, and as the ram and torpedo have no more respect for the costly iron-clad than the comparatively cheap wooden vessel, I should prefer converting our iron into guns rather than into armor. As to what these guns shall be, whether rifled or smooth bored, our able Chief of Ordnance is a most competent judge. By the world generally, the former is considered in every respect superior to the latter, yet I confess to not being entirely convinced of the justness of the decision.

I was for a long time intimately associated with the late lamented Admiral Dahlgren who, without disparagement to any, I may safely say was the greatest ordnance officer our Navy has yet produced, and up to the day of his death he was firmly persuaded that for "close action"—and no naval battle has ever yet been decided at long range—the smooth-bore possessed decided advantages over the rifle. In the experiments initiated by him against iron-plating at 400 yards while the rifle bolt went through the target at every discharge, the spherical projectile fell dead apparently at its base for the first three or four fires; but then, suddenly following the report of the smooth-bore, came a crashing sound, and it was found that the target had been shaken to pieces. It must be borne in mind that these trials were made against plating of less than half the thickness of that now used in England, and, therefore, do not afford a fair test of the relative merits of the two guns at this time; but I submit that recent experiments, on the other side of the water, have not been exhaustive in this regard, and are, therefore, neither satisfactory nor conclusive.

Placed side by side, with the full power of each developed against targets at short range, the gun which shall be found to have produced the greatest effect after twelve rounds have been fired in quick succession, will, it appears to me, be the best for general purposes whatever may be the merits of the other for special service; for in assembling vessels to attack forts or fleets you could in one fire have the concentrated effect of these twelve rounds many times repeated. In saying this, let it not be understood that I am an advocate of the smooth-bore; on the contrary, all that I have read of late inclines me to prefer the rifle, and that which has most influenced me in its favor is a remark of Captain Jeffers, that from it you "get greater explosive effect for same weight," but I do think that, before substituting one system of armament for another, we should test the matter ourselves to the "bitter end," and I trust that Congress will see the wisdom of making a liberal appropriation for this purpose.

As to the calibre of the guns, notwithstanding what has been said to the contrary in an exceedingly forcible prize essay, which has met with general favor in England, I espouse the American idea—"the bigger the better;" depend upon it, with Yankees to serve them the shot of mammoth guns will not be thrown away. They have a saying "out West," that it is "bad manners to draw a pistol unless you intend to use it;" and, though it may not be ill-mannered, it is certainly unwise to hit a ship at all unless you do her some damage; for men get a contempt for that which does not hurt when it strikes them. With a fleet composed of the three classes referred to above, an admiral informed by his lookouts of the approach of an enemy, would signal such a formation as he should deem best, always, however, keeping his artillery in the centre of the fleet, and his rams nearest to the enemy, and well in hand, in readiness to begin the attack. No order of battle could be laid down which would suit every occasion, and the effect of adopting any one order as absolute would be to give your enemy the advantage of knowing how he should find you, and laying his plans accordingly, while you would be left in doubt, up to the last moment, as to what his method of attack or defence would be. A fleet should be so drilled as to be enabled to assume any formation with readiness, and it should be a unit of force acting under one head. Nothing could be more fatal to us than the acceptance of the idea that it may be separated into groups, each group being, to some extent, independent of the other.

For at sea as on the land, "war is nothing more than the art of concentrating a greater force than the enemy upon a given point," and Commander Noel's plan of battle would simply afford one's adversary, in my opinion, a chance of surrounding his detached groups one after the other with a superior force, and thus whipping the whole fleet in detail.

I may remark here, that in our new tactical signal book, the signal—"From the centre of three, four, five, etc.—form double echelon" (natural or inverted), affords us the means of throwing our whole fleet, or any division or squadron of it, into groups offensive or defensive of any required depth, each group, however, being closely supported by all the others.

Opening the ball with artillery vessels "passing

each other, at a combined speed of twenty knots," could only result in one of those indecisive actions which every commander-in-chief should aim to avoid; for three-fourths of the projectiles fired would fall into the sea while the smoke of the guns on both sides would so obscure the vision, as to render the attack of the rams of no avail.

In my judgment, the rams should begin the action by charging the enemy, and throwing him into confusion or bringing him to a stand, then the artillery vessels would open with some effect and the torpedo boats under cover of their fire, proceed stealthily but swiftly to complete the work of devastation inaugurated by the charge.

After charging through the enemy, the rams should reform and charge back, or, if unable to do this, pass around his fleet attacking every thing in the way, and, after regaining their own lines take their position with the reserve in readiness to act with it when the "supreme moment," as the French term that instant, when victory or defeat hangs in the balance, has arrived. This is the time too, to put in every boat fitted with torpedoes, that the condition of the sea will permit to be lowered.

It would seem useless, perhaps, for us to talk of the assembling of fleets when our flag scarcely floats from the mast-head of a merchantman upon the sea, and the city of New York, our commercial metropolis seems so far indifferent to the national misfortune as actually to take pride in the number of foreign steamers which daily leave her wharves, yet I cannot but believe that the Great Republic will awaken from her lethargy ere long, and once more put forth her strength upon the deep.

When that day comes, when our commerce is again extended to the remotest corners of the earth, I have faith that a Navy will be created for its protection worthy of a great people, whose fleets some of you, gentlemen, will be called upon to command.

This you can prepare yourselves to do intelligently, only by devoting yourselves zealously to the study of your profession; and let me advise you, above all else, to read diligently the naval history of the past and the present, and to imitate Nelson in his close study of naval tactics; for depend upon it, that in future naval battles, other things being equal, victory will belong to that fleet which is most skillfully manoeuvred.

In conclusion, let me repeat what I have so often said before, namely, that a man-of-war, without speed and turning power, is as useless as "a painted ship upon a painted ocean," no matter what her armament or armor—and let me beg of you, in opposition to the doctrine of dividing fleets into independent detachments, to adopt for your motto: The ships of our Union and the union of our ships; may they be like our States, "one and inseparable."

THE state reception given to the King of the Hawaiian Islands, at the Executive Mansion, on Friday evening, the 18th instant, is conceded to have been the most brilliant that has ever taken place in Washington. Several hundred cards were issued, being confined to the Supreme Court, the Legislative and Executive Departments of the Government, the Diplomatic Corps and the Army and Navy. Among the prominent officers of the Navy present were Admiral Porter, Rear-Admirals Radford, Bailey, Davis, Sands, Alden, Reynolds, Poor; Commodores Howell, Jeffers, Ammen, Wyman, Clitz, Patterson; Surgeon-General Beale; Paymaster-General Wainwright; Engineer-in-Chief Wood; Chief-Constructor Hanscom, Captain Temple and his aids, who attend the King; Majors Cash, Slack, McCauley and Nicholson; Pay-Inspector Thornton, Surgeon Nelson and most of the younger officers stationed at Washington. The Army was represented by General Sherman, Major-Generals Parke, Meigs, Marcy, Hunter, Heintzelman, Elliott, Barnes, Ricketts, Lorenzo Thomas, Townsend; Brigadier-Generals Babcock, Benet, Bingham, Myer, Pelonze, Poe, Vincent; Colonels Casey, Mack, Norris, Winthrop; Lieutenant-Colonels Clarke, Haines, Larned, Laub, Ludington, Martin, Otis, Sigreaves and Woodward, and others of high rank. These officers were in full dress uniform, and together with the entire Diplomatic Corps, in their Court dress, presented a scene seldom surpassed in this country. Several officers, military and naval, of other countries were present. Among them Admiral Jones, attache of Her Majesty's Legation, and with their decorations added brilliancy to the occasion.

The introductions to the King were made by Secretary Fish, who stood on his left, and as the guests passed on they extended congratulations to the President, then to Mrs. Grant and Mrs. Fish, and last to Lieutenant-Colonel Fred. Grant and his interesting bride. The Secretary of the Navy and the Postmaster General marshalled the hosts as they moved up to the distinguished visitor. The Marine Band, although a little wearied from the two previous evenings at the Centennial tea party, enlivened the occasion with their choicest selections, and hailed the King's approach by a skillful execution of his national air. The East Room was well filled, but the adjacent reception parlors and large state hall gave ample room for retirement and promenades.

King Kalahaua will visit the Naval Academy and Mount Vernon before proceeding North.

THE Danish navy bill provides for 12 first-class vessels, plated and unplated; rams, torpedo boats, and tenders; and asks 10,000,000 crowns during the next ten years for new buildings. Conscripts after two months' drill ashore are to serve on board for ten months. Four years' contingent will suffice to man the whole navy on a war footing. The officers are augmented in number. A chief constructor directs the special department of the Ministry. The yearly navy budget is 4,800,000 crowns.



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## U. S. ARMY AND NAVY JOURNAL.

NEW YORK, SATURDAY, DECEMBER 26, 1874.

### THE U. S. NAVY, 1874-5.

IMAGINE an army whose artillery consists of culverins or leather cannon—whose infantry is equipped with match locks or arquebuses in place of needle guns or Remingtons: then compare the fighting power of a body of men so armed, with a modern European army equipped, as it is, in every detail, with the results of great mechanical skill introduced after scientific and thorough scrutiny by great masters in the art of war. The two pictures will scarcely be more striking in contrast, than a sketch of our Navy compared with that of any one of several powers, or compared with what our Navy ought to be if the money its material has cost had been intelligently applied.

The report of the Secretary of the Navy for 1874, contains the usual information respecting the distribution of squadrons, and gives a very sanguine view of our naval efficiency, based chiefly on the results of the naval assemblage in the Bay of Florida; but we regret to see that it contains no hint of any definite policy of naval construction. The present state of naval science requires that we should have some policy if we are to expend the naval appropriation to any advantage. The conditions brought about by steam, armor, and the heavy ordnance of late years, and it is safe to add by the torpedo, have made this imperative. Doubtless the power of the torpedo, in the present state of the art of submarine attack, exists largely in the imagination; but the promise and potency of this mode of defence are so great that there is only required the appreciation of our present defenceless state, on the part of Congress, and common sense on the part of the Navy, to make it a practical and certain system. One effect of this will be to place it in the power of weak nations to defend their harbors and coasts from naval attack, and to enable any country to keep off a maritime foe by far more effective means than maintaining a vast and costly armada.

The Navy Department asks for nineteen millions, about one-half to be devoted to constructive purposes, the other to the personnel of the service. This distinction draws a sharp line: the Department may be organized with eight Bureaus, or little Navy Departments, as it now is, or with a greater number, their functions must come under one of these divisions, i. e., the construction and maintenance of naval vessels, on the one hand; and on the other the personnel and service afloat. We propose to review the former division of the service systematically, giving a brief outline of the type and condition of each vessel, beginning with the first borne on the Naval Register for 1874. If in thus surveying our naval force, as will presently be seen, there is nothing to commend, we cannot fairly be charged with a want of proper national feeling in exposing our weakness. The "Grand Naval Drill," as it is popularly called, which took place in the Florida Gulf about one year since, placed before the world far more conspicuously than it is in the power of any public journal to do, our real naval strength, or to be more exact, our naval weakness. Agreeing as we do with the opinion of officers of wide information and discernment, sorrowfully but emphatically expressed, it is within bounds to characterize this squadron, gathered together as it was by great exertion and for a warlike purpose, as a collection of naval trash, unworthy the Navy and the Nation, without a ship in it (with perhaps one exception) capable of meeting other than at a disadvantage such vessels as are possessed by the feeblest navies in Europe, to say nothing of the iron-clads of some of the South American powers.

One experienced officer present at this review said, "When he entered the service as a midshipman, wherever he went he found that the American frigate was a little better than the frigates of any other nation, that the American sloop-of-war was a little better; and in his travels he found that, vessel for vessel to the extent that we possessed war vessels, the United States was in advance. Foreigners copied our style." Admiral DAHLGREN stated, not long before his death, in an official report: "The policy of the country always has been, and should be adhered

to, that however small our naval force in peace, every vessel of it shall combine in itself the highest known qualities of a ship of war in armament, speed, and personnel."

Now, owing in a large measure to the confusion brought about by our system of naval administration established by law, we can no longer point to the individual excellence of our vessels. So far from combining the "highest known qualities" of ships of war, they scarcely possess a single feature of excellence. A war vessel has long since ceased to be the product of a ship-carpenter's adze, carrying the long rows of cast iron smooth bores, with which we once won naval renown. The highest efforts of engineering and mechanical skill have been and will continue to be brought to bear on every detail which enters into the composition of the naval fighting machines, as such vessels actually are, that now constitute the real strength of a navy.

The Fleet Engineer, speaking of the Florida Gulf naval review, said, "It is probable that under favorable circumstances two or more of the vessels might have been driven up to ten knots; but for the great majority six knots was the maximum steaming capacity against a moderate head wind and over a smooth sea." The fleet was armed with antediluvian cast-iron smooth-bore shell guns; with perhaps the exception of three or four 15-inch, these would be absolutely harmless, for example, against the Spanish iron-clad *Arapiles*, while her projectiles could perforate any iron-clad, except one, in the squadron. As Commodore PARKER shows in his able criticism of the review which we publish this week, one iron-clad—any one selected from a long list we have before us—could sink or disperse such a collection of slow, vulnerable and gunless vessels as made up our fleet. It may be affirmed that this wolf running among these sheep might have a pole poked under his bottom with a pot of powder on the end of it; but when it is remembered that "our attacking ships" (at the great naval drill) were limited to a speed of four miles an hour in approaching the supposed antagonist, and that in place of the non-resisting floating target, an enemy's ship in rapid motion would be encountered, which, instead of waiting until the assailant, creeping at the rate of four miles an hour, had come near enough to be able to thrust his powder bag under the hull, would fire a broadside of grape, at short range, against the boom with its ropes and tackle—not to mention the crew handling the complex gear—what would happen? Among other disastrous effects would not the *electric key* be so disturbed that the "circuit" would not be made at the precise second of time necessary to make this contrivance in any degree effective?

From June 30, 1869, up to June 30, 1874, there had been appropriated by Congress in round numbers \$50,000,000, (not including \$3,200,000 which was appropriated for eight sloops of war), which has been spent in tinkering the old vessels of the Navy—i. e. on ships, and things entering into their maintenance. This large sum does not include the pay or maintenance of officers and men or any expenditures connected with either the Bureau of Provisions and Clothing, or of Medicine and Surgery, or of the Marine Corps, nor for coal nor for any expenses belonging to the Bureau of Equipment and Recruiting, except about \$1,000,000, properly chargeable to maintenance of vessels, in 1869. During this period not a new vessel has been built, except the feeble torpedo boats *Intrepid* and *Alarm*. This money has been spent in "repairing" old vessels, not one of which, as all competent judges must admit, has the qualities essential to a modern vessel of war. In several instances, particularly in the case of certain iron-clads, large amounts have been very unwisely spent; the result will be, (as will be shown presently), vessels, which in the chief requisites are no better than they were before these expensive alterations were begun.

We will now go through the list of our Navy, taken from the Naval Register, giving a brief outline of each vessel, to confirm all we have said respecting the condition of the service concerning its vessels:

### WOODEN STEAM VESSELS.

1st RATE.—Colorado, Wabash and Minnesota, frigates with auxiliary power, built in 1854, can steam under favorable circum-



stances about 7 knots; against a head wind, force say 5, will just about hold their own; their steam machinery (Martin boilers included) was behind the age even when it was built some 18 years ago. They carry battle-ies of 9-inch cast-iron smooth bores, and, in a word, are a type of vessel long since obsolete.

*Franklin*, same class as above, built about a knot more speed, completed some two years after the war, long after the type was a naval curiosity.

*Niagara*, a huge sloop, built in 1854, so deteriorated she cannot be rebuilt. Steam machinery condemned and broken up.

*2d Rates.*—*Nevada*—*Wampanoag* class, known as Isherwood engine carriers—hull of white oak, not even copper fastened; never at sea, but board reported "she exhibits a marked cant or twist of hull"—she presents even a worse case than the *Wampanoag*—"she is utterly unworthy of repairs and ought to be sold immediately"—not a single gun can be used on her gun deck in giving chase to an enemy ahead. We believe she has been condemned and will be broken up.

*Connecticut*, same as above, on the stocks at Boston, will probably never be completed—frame of white oak.

*Florida*—late *Wampanoag*—has never been to sea, except for a deceptive trial trip down the coast "with a fresh breeze abaft the beam."

The following figures, relating to *Wampanoag*, will give some idea of the nature of these vessels: Total weight of vessel, 4,339 tons, made up as follows: engine and boilers, 1,260 tons; coal, 750 tons (2,010); battery and objects of ordnance, 111 tons; spars and rigging, 160 tons; anchors and other gear, 1,000 tons; 375 men and stores, 53 tons; bare hull, 1,975 tons; cubic feet occupied by engines and MARTIN'S patent boilers, 17,437.

*Tennessee*, same as above, except engines, the entire steam machinery has been taken out, and is being replaced by new; we have not space here to treat of the costly alterations made on the ship, but will do so on another occasion—suffice it now to say that this vessel, by the time the present repairs are done, will have cost the treasury some two and one-half million for construction, repairs and alterations.

*California*, *Illinois*, *Guerriere*, modified *Wampanoags*, constructed of green timber, rotten, to be broken up. *Antietam*, *Jaca*, *New York* and *Pennsylvania*, same as last, keels laid 1863, still on the stocks—(two, we think, with live oak frame). *Delaware*, same, in use as training vessel at the Naval Academy, N. Y. All this class had ISHERWOOD (60 x 36) engines made for them, and piled in the Navy-yards—now condemned.

*Susquehanna*, old paddle vessel some 23 years old, is now being "repaired" into a screw, and, we believe, to be fitted with an ISHERWOOD engine.

*Lancaster*, *Brooklyn*, *Pensacola*, *Hartford*, *Richmond*, all built before the war 1858-60, machinery built by private establishments, probably the best vessels in the wooden Navy, but they are fast becoming, if not already, obsolete, and are not fitted to engage modern vessels of same displacement.

*Albany*, *Congress*, *Savannah* and *Westchester*, modified *Wampanoags*, built of white oak, rotten and worthless, not worth repairing, have ISHERWOOD (60 x 36) engines.

*Franklin*, old paddle vessel, some 23 years old.

*Savannah*, old paddle vessel, some 20 years old.

*Alaska*, *Benicia*, *Omaha* and *Plymouth*, built in 1863 of white oak, and by this time must be pretty rotten, they are equipped with ISHERWOOD engines, and some of them with MARTIN patent boilers, etc. They are small vessels, length between perpendiculars 250 feet 6-inch, beam extreme 38 feet, depth hold 19 feet, 7-inch.

*Lackawanna*, *Ticonderoga*, *Canandaigua*, *Monongahela* and *Shanandoah*: dimensions, length 236 feet, breadth 38 feet, 4-inch, depth 10 feet 3-inch; built in 1862-3. ISHERWOOD machinery. One or two have live oak frames. A good deal has been done to improve them, but they are very poor concerns for vessels of war. Their boilers are well above the water line, so that one shot striking the side anywhere abreast of the long length, fore and aft, occupied by the boilers, would scald every man on watch in the steam department, and destroy the motive power.

*2d Rates.*—*Junia* and *Ostrea*, small sloops built 1862-3; ISHERWOOD machinery; MARTIN'S patent boilers well above water line; can neither sail nor steam as vessels of this size (1,900 tons displacement) ought to. They are said to be poor sea boats; in a late gale the *Ostrea* lost all her boats.

*Quinebaug* and *Savannah*, built with live oak frames, the machinery of former condemned and put in scrap heap; are being repaired with live oak frames and "increased dimensions." *Savannah* had ISHERWOOD machinery, it has been "repaired" into "compound." As the latter is the first vessel sent to sea with "naval compound machinery," her late voyage to Bahia has been looked at with interest. It is reported that under steam in the calm, with fires under six boilers, and with an average speed of 6½ knots, she consumed about 15 tons of coal in 24 hours! The temperature in the engine and fire rooms cannot well be kept below 130 deg. "Her average speed under sail any one day was 8½ knots. She does not stand up well under canvass."

*Galena*, an old broadside iron-clad built in 1861-2; white oak frames; armor stripped off and hull "repaired" with live oak frames and "increased dimensions."

*Vandalia* and *Marion*, old sailing vessels built about 25 years ago, being repaired with "increased dimensions" and fitted with a screw and compound engines.

*Troquois* and *Wyoming*, built before the war, with machinery by private builders, but with "MARTIN'S patent boilers" above the water line, probably as good as any medium wooden vessels in the Navy, but for the small displacement (1,500 tons displacement) they can scarcely cope with modern sloops now used for the same general naval purposes.

*Wachusett*, *Mohican* and *Iscadorra*, built in 1861-2, and copied from the last.

*Vandalia* and *Marion*, condemned and to be broken up.

*Narragansett*, (1,100 tons displacement) a sloop, not a redeeming feature, built before the war.

*Ashuelot* and *Monocacy*, two old paddle steamers built in 1863, now in Asiatic station, and reported to be too unseaworthy to be sent home.

*Nipole*, (worthless, but a new one is being "repaired" to take her place), *Saco*, *Nyack* and *Shanout*, gun boats with 3 guns, built during the war; ISHERWOOD machinery; boilers well above water line.

*Yantic*, same, with engine by private builder.

*Kanawha*, same, fitted with machinery captured in blockade runner; when new was fast under steam.

*Michigan*, iron-paddle vessel on Lake Erie, about 25 years old.

*4th Rates.*—*Frolic* and *Geltyburg*, iron-paddle vessels, captured blockade runners.

*Tallapoosa*, iron-paddle vessel, department yacht.

*Wasp*, small paddle vessel with 1 gun.

*Falos* and *Despatch*, screw tugs.

We next come to an assortment of wooden sailing vessels. These consist of two old line-of-battle ships on the stocks; three vessels in use at the Naval Academy, five store ships; three ships in commission for various purposes; seven receiving ships at the Navy-yards; and seven laid up in ordinary; one yacht—this, we believe, has been disposed of.

Under the head of iron-clads—a class which constitutes the real strength of modern navies—we find fifty-one vessels entered on the Register. Of this number, the *Albama*, *Cohoes*, *Etah*, *Hero*, *Iris*, *Klamath*, *Koka*, *Minnetraka*, *Modoc*, *Napa*, *Nauvett*, *Nohe*, *Otsego*, *Piscataqua*, *Shavonnee*, *Suncook*, *Umpqua*, *Wassuc*, *Yamoo* and *Yuma*. These are the so called twenty "light draughts" on which some twelve or fifteen millions were squandered. A Congressional investigating committee undertook to find out where the responsibility of these constructions belonged, but, if we may believe their report, this important point

eluded discovery. Both the Constructive Bureau openly declared that they had nothing whatever to do with them except in a ministerial way, the distinguished officers who recommended certain important features maintained a wise silence, and the inventor of the monitor had placed himself on record, in an official communication, as in condemnation of the plan on which they were built, before a rivet had been driven in their construction. They are perfectly worthless, and as the Department has taken steps to dispose of them at almost any price, they may be dismissed from the register.

We next come to the Passaic class; these consist of the *Comanche* (at San Francisco), *Catskill*, *Lehigh*, *Montauk*, *Nahant*, *Nantucket* and *Passaic*. These are small vessels of about 1,200 tons displacement; they were built with great despatch during the early part of the war, during which they did most excellent service; their side armor is made of five one inch plates, and their turrets of eleven plates, each fifteen-sixteenths of an inch. Laminated armor was resorted to at this time, 1862, because there was not then a mill in the country that would take an order for rolling plates of greater thickness than one inch. It was adequate to resist the artillery then in use, as is abundantly shown by their numerous scars. It is needless to say that in twelve years—from 1862 to 1874—vast changes have taken place in both armor and guns. Among other important points, it was proved many years ago, that there is no comparison between the resistance offered by a given thickness of armor, composed on one hand by a number of plates bolted together, and on the other by one solid plate; the solid armor presenting many times greater resistance than the laminated. The 7, 8, and 9 inch Woolwich rifle guns, now compose the armament of the second rate British iron-clads, and are also to be seen in the batteries of many of their new and swift non-armored vessels; guns of equal power made in France, in Sweden, in Russia, and by KRUPP, are common in the batteries of every European navy, Spanish included.

The 7 inch gun will easily pass its shell through the armor of all but one of our iron-clads, while the 8 and 9 inch can do the same execution on the strongest of them. But the 7, 8, and 9 inch are now looked upon as small affairs; 600 and 700 pounders are now afloat within the turrets of European monitors, in some cases protected by 14 inch solid plates; more monitors like these are in course of construction. It is absurd to speak of this ordnance in connection with any armor in our Navy—one 600 pound shell exploding within a turret or hull would probably decide the issue for the vessel so hit.

With most of these facts before us, the JOURNAL in its issue of Oct. 13, 1866, called the attention of the department to this important matter of armor; and again, after more evidence of the same sort had accumulated, we urged that this matter receive consideration, under date of Feb. 24, '72, and Dec. 27, '73. In the winter of 1873-4, when the department turned over nearly all of the monitors of the Passaic class, on the Atlantic seaboard—seven in all—to iron ship builders on the Delaware and in New York, to have their hulls raised and new decks put on them, omitting the vital point of solid armor, we again placed the subject before our readers at length (March 7, 1874.)

The next class of iron-clads are those known as the harbor and river monitors, the *Ajax*, *Canonicus*, *Mahopac*, *Manhattan*, *Saugus* and *Wyandotte*. These are of some 300 tons greater displacement than the Passaic class; like them they were built during the war. With regard to armor the strictures applied to that class apply with equal force to this, the turrets being made of ten one inch plates, and the side armor of five one inch plates, and "armor stringers" 4 inch thick let into the backing behind them; these stringers are two in number, bars of iron 4 by 6 inches. As the backing in this class is little more than one-half the thickness of the former, the resistance is but a trifle greater. A number of these vessels are having the same character of alteration put on them as the others, hence the views expressed respecting them include these also.

It is, however, evident, that if the cost of solid armor of adequate thickness, about \$112,000, necessary to save these two classes from utter worthlessness, is

added to the \$180,000—cost of present repairs—and to the indefinite, but large amount that will be expended, under the head of "extras" and "repairs to steam machinery," a sum total will be reached, which would go very far towards building an entirely new iron-clad, comprising all the improvements demanded by the last ten years of progress, and which are essential to enable us to meet the armored vessels now in European navies, should they make a hostile visit to our harbors or coasts. That a class of defensive vessels suited for this purpose is a matter of the very first importance no military man will deny. Yet no intelligent effort or proposition has been made in this direction.

The next class of iron-clads consists of the double turreted monitors, *Miantonomah*, *Amphitrite* (formerly *Tonawanda*), *Monadnock* (at Mare Island, Cal.), and the *Terror* (formerly *Agamentious*). These were built during the war; their hulls are of wood—green white oak—and are now thoroughly rotten; their displacement is about 3,000 tons. The turrets are made of ten one-inch plates, the side armor is likewise composed of one-inch plate, hence what has been said of the worthlessness of this sort of protection is also applicable to this class. It is understood that three of these vessels on the Atlantic seaboard, are undergoing repairs of a very novel character, viz: the wooden hulls are being "repaired" by replacing them with hulls built of iron. As their armor on hull and turrets is worthless, as their steam machinery (in two of them of the well-known Isherwood type), is pretty well used up, as their wooden hulls are rotten, and as their turret arrangement cannot be wisely applied to an iron hull without reconstruction, the senselessness of wasting appropriations in this way needs no further demonstration.

It is represented that the *Monadnock*, whose white oak hull is now rotten in California, is being repaired by having a new vessel built of iron at New York, to be there put together, the parts marked and then shipped to San Francisco, where they will be put together, and thus carry out such "repairs," as we think were little imagined by Congress when the appropriation bill passed that body.

If, these "repairs" to this class do not carry with them "increased dimensions," even should the afterthought of solid armor be acted upon, they cannot be made adequate to the requirements of the times. The makeshift that it has been affirmed is to be adopted, is a foolish waste of money. It is to consist in straightening and applying to "raised" sides of these monitors, the narrow, curved and brittle solid hammered five-inch iron slabs made for the central part of the turret walls of the *Colossus* class. These slabs are utterly unfit for armor; all the guns already mentioned as sufficiently powerful to send their shells through the laminated armor, will produce equally damaging effects on this inferior hammered metal, which for the purpose of a facing, exposed to shot, is but little better than cast iron.

Again, their displacement is insufficient to carry two turrets and permit them as well as the hull to have the thickness of armor required to keep out the projectiles from guns now afloat. Still further, if the "increased dimension" plan is resorted to, the present steam power is inadequate to give even tolerable speed. Is this then to be "repaired" with "increased dimensions?" View this matter in any light, it is evident the old jack-knife, with the new blades and handle, is the old jack-knife still.

The *Kalamazoo* class of iron-clads, the next in order, consists of the *Colossus* (formerly *Kalamazoo*), *Massachusetts* (formerly *Pennaconusaway*), *Oregon* (formerly *Quinsigamond*), and *Nebraska* (formerly *Shakamaxon*).

These vessels were begun during the war, their hulls are of white oak, and may now be regarded as worthless. Speaking of them, the Chief of Bureau of Construction (see appendix to Secretary's Report, 1871,) says: "Four of the largest class, built in the Navy-yards of white oak, are now on the stocks, two of which are too much decayed to be completed, and should be broken up. One, the *Colossus*, I respectfully recommend be completed and launched as a type of the class." Let us see what this type is: It has been decreed that this vessel is to be finished as a broadside iron-clad, throwing away the costly turret arrangements that have been made for her, and 10



guns have accordingly been cast for her new battery.

Whoever is responsible for this recommendation, we are bound to say, made it either without due reflection or in ignorance of the existing relations between guns and armor. It would produce a vessel years behind the times, unable to cope with modern iron-clads; the hull of white oak, which would rot in a few months, with displacement (even with one-quarter of the steam power left out, as is the case), insufficient to carry armor thick enough to give protection against artillery long since afloat, and with a maximum speed, under favorable circumstances, of not over 10 knots! Such is the character of a vessel the Department is seriously recommended to construct.

The *Chickasaw*, *Kewadin* and *Winnebago* are the remains of the Mississippi flotilla of iron-clads, built during the war. They have had their day, and now add nothing to the strength of the Navy.

The *Dictator*, built during the war, has a strong iron hull, probably in nearly as good condition as when built, but the hull is armored with laminated plates, and bars let in the backing behind them; the turret is also made up of laminated plates and bars—no better armor could then be had. Armor this vessel with solid armor, and equip the turret with the best guns attainable, and though built so long ago, she would be one the most formidable iron-clads in existence. There are not three iron-clads now built that could engage her with impunity if she was put in the condition she ought to be put in at once. If a small part of the money that has been wasted in tinkering at worn out vessels had been applied in this way, no one can deny that it would have been a wise expenditure.

The *Puritan* has an iron hull similar to, but 25 feet longer than the *Dictator*—it was pronounced by Admiral Goldsborough's board to be of "masterly workmanship." This vessel, completed with solid armor, (as already mentioned regarding the *Dictator*), would be a strictly first-class iron-clad. She is now at League Island, never having been completed; the money that ought to have been spent in giving the country an iron-clad capable of meeting the enemy has been frittered away.

The *Roanoke* is one of the frigates of 1854, cut down during the war, and fitted with three turrets, made of eleven plates fifteen-sixteenths of an inch in thickness—as before pointed out, a mere pasteboard protection; her sides are high, and are armed with four and one-half-inch hammered plates, fastened with through bolts directly on the old hull; altogether she is of but little account. She is now in commission in New York Harbor.

The last vessels on the register are twenty-five steam tugs, mostly purchased or built during the war, averaging about 250 tons, and mounting in all eleven brass boat guns, and scarcely worth mentioning as part of the naval force.

We have thus pictured the condition and character of our vessels, and must be allowed to say, without imputing blame to any one, it exhibits our Navy at a very low ebb. The Navy is absolutely but little if in any better condition to-day, respecting its material, than it was six years ago, or thereabouts, and relatively with the progress of naval science it is in a much worse condition than it was then. Millions have been tinkered away without system and without intelligent appreciation of the real needs of the service. Our vessels have long since ceased to be "individually excellent;" on the contrary, they are now individually very imperfect. The wooden vessels are slow and feebly armed; vast sums have been and are still being spent on the iron-clads, and yet in the very points where they are the most deficient nothing has been done; the result is, that after all this money has been spent, they are not only nearly worthless for war purposes, but they are but little better than before this unsystematic patch-work was begun.

We do not mean to charge any individual with the responsibility of this and other blunders equally gross. The nature of our system of naval administration is such that responsibility for faulty construction or stupid blunders is never fixed. If a vessel is slow, deficient in stability or other essential qualities; has a greater draft of water than promised, is deficient in battery; if millions are expended in making alterations and repairs not needed, and neglecting

those imperatively demanded; then if the disgraceful results of our "system" are, with the simplicity of a child paraded before the world by a "grand naval drill," it may well be asked, who or what is to blame? Instead of an answer, a familiar phrase is heard:

"Thou canst not say I did it; never shake  
Thy gory locks at me."

This article is a long one, but we have merely crossed the threshold of a subject which is so important to the Navy and the country that we intend to continue its discussion, going still further into details.

#### ARMY AND NAVY BILLS IN CONGRESS.

By Mr. Nesmith (H. R. 3875): That the sum of \$10,000 be, and is hereby, appropriated, out of any money of the Treasury not otherwise appropriated, for the manufacture, at the Springfield armory, of the Roberts breech-loading musket and carbine; and that the muskets and carbines so manufactured shall be placed in the hands of troops in the field, under the direction of the Secretary of War. Sec. 2. That after trial of said arms in the hands of troops for two years, the Secretary of War shall report to Congress the result of such trial, and the opinion of the officers of the Army who have had them in charge, on their merit as a service-arm both for cavalry and infantry.

By Mr. Niblack (H. R. 3893): That from and after June 30, 1875, the artificial limbs and appliances granted under authority of law to persons disabled in the military or naval service of the United States shall be furnished only in kind, and through the Medical Department of the Army. Sec. 2. That the prices to be paid shall be the lowest market-prices of the several kinds of limbs, and appliances required, and shall in no case exceed \$100 for any artificial limb or appliance. Sec. 3. That when any natural limb has been wholly disabled, and cannot be rendered serviceable by any mechanical appliance, the invalid shall be entitled to the same increase of pension as if he had suffered amputation above the knee or elbow, as provided in the act entitled "An act to increase pensions in certain cases," approved June 18, 1874. Sec. 4. That necessary transportation to have artificial limbs fitted shall be furnished as heretofore by the Quartermaster-General of the Army, the expense of which shall be refunded by the Surgeon-General of the Army.

By Mr. Todd (H. R. 3885): That the President be, and is hereby, authorized to so correct the military record of Lieutenant-Colonel Washington L. Elliott, of the First Cavalry, as to create and make him third in rank on the list of lieutenant-colonels of cavalry, by virtue of this act; it being the purpose of this act to give said Elliott the rank he would have had by virtue of the law for promotion and appointment in the Army if such law had been carried into effect.

By Mr. Hurlbut (H. R. 3887): That Colonel and Brevet Major-General Benjamin H. Grierson, U. S. A., having performed the duties of aid-de-camp to brigadier-General B. M. Prentiss, U. S. volunteers, from May 8, 1861, until Oct. 24, 1861, when he accepted his commission as Major of the Sixth Illinois Cavalry, and having continued to serve on the staff of Brigadier-General Prentiss, with such rank as major, until Dec., 1861, and thereafter with said Sixth Illinois Cavalry until January 9, 1862, the date of muster-in with his regiment, shall be deemed and taken to have the rank of first lieutenant of cavalry, to date from May 8, 1861, as if regularly commissioned and mustered of that date, and to take rank thereafter in the various grades to which he was appointed or promoted in the volunteer or regular service, in accordance with the dates of the rank as set forth in his several commissions received from the governor of Illinois or the President of the United States; and the record of said officer in the Army Register, and as to relative rank, shall be amended in accordance with this act.

By Mr. Eugene Hale, Naval appropriation bill (H. R. 3819), the following sums: for pay of commissioned and warrant officers at sea, on shore, on special service, and of those on the retired list and unemployed, (and for expenses and transportation of officers travelling under orders,) and for pay of the petty-officers, seamen, ordinary seamen, landsmen, and boys, including men of the engineers' force, and for the Coast-Survey service, (8,500 men,) \$6,250,000; contingent expenses of the Navy Department, \$100,000; the civil establishment at the various navy-yards and stations, \$158,000.

**Bureau of Navigation.**—Foreign and local pilotage and towage of ships of war, \$50,000; services and materials in correcting compasses on board ship, and for adjusting and testing compasses on shore, \$3,000; nautical and astronomical instruments, etc., and repairs of same, \$10,000; books for libraries for ships of war, \$3,000; navy-signals and apparatus, \$6,000; compass-fittings, etc., \$5,000; logs and other appliances for measuring the ship's way, leads and other appliances for sounding, \$3,000; lanterns and lamps, and their appendages, for general use on board ship, \$5,000; materials for flags, and repairs, \$5,000; oil for ships of war other than that used for the engineer department, and candles, \$20,000; stationery for

commanders and navigators of vessels of war, and for use of courts-martial, \$2,000; musical instruments and music for vessels of war, \$1,000; steering-signals and indicators, and for speaking-tubes and gongs, for signal-communication on board vessels of war, \$2,500; contingent expenses, \$4,000; drawing, engraving, and printing and publishing hydrographic information, and for making charts, including those of the Pacific coast, \$60,000; fuel, lights, and office-furniture, etc., \$5,000; rent and repair of building, \$2,800; expenses of Naval Observatory, \$41,000.

**Bureau of Ordnance.**—Fuel, tools, and materials for ordnance mechanical branches at navy-yards and stations, \$75,000; labor at all the navy-yards, magazines, and stations, \$250,000; repairs to ordnance-buildings, etc., \$10,000; miscellaneous items, \$5,000; the torpedo-corps, \$94,000.

**Bureau of Equipment and Recruiting.**—Equipment of vessels, \$1,250,000; contingent expenses, \$75,000.

**Bureau of Yards and Docks.**—General maintenance of yards and docks, \$760,000; contingent expenses that may arise at navy-yards and stations, \$40,000; the Naval Asylum, Philadelphia, \$52,978; which sum shall be paid out of the income from the naval-pension fund.

**Bureau of Medicine and Surgery.**—Support of the medical department for surgeons' necessities for vessels in commission, navy-yards, naval stations, Marine Corps, and Coast Survey, \$30,000; necessary repairs of naval laboratory, etc., \$5,000; the civil establishment at the several naval hospitals and naval laboratory, \$35,000; contingent expenses, \$25,000.

**Bureau of Provisions and Clothing.**—Provisions for the officers, seamen, and marines, \$1,300,000; purchase of water for ships, \$35,000; contingent expenses, \$50,000.

Total sum recommended \$16,976,006.40.

**Bureau of Construction and Repair.**—Preservation of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; labor in navy-yards and on foreign stations; preservation of materials; purchase of tools; wear, tear, and repair of vessels afloat, and for general care and protection of the Navy in the line of construction and repair; incidental expenses, namely, advertising and foreign postages, \$3,300,000; salaries of subagents and watchmen and miscellaneous expenses incurred in the protection of timber-lands, \$5,000.

**Bureau of Steam-Engineering.** \$1,800,000; Naval Academy, \$174,117.40; Marine Corps—Pay of officers, non-commissioned officers, musicians, and others, \$319,790; the civil force, \$10,000; pay of 1,500 privates, and no more, \$270,000; provisions, \$100,000; clothing, \$100,000; fuel, \$30,856; military stores, \$9,000; transportation of troops, \$5,000; repairs, \$6,000; forage for horses belonging to field and staff officers, \$3,000; hire of quarters for officers where there are no public quarters, \$10,000; contingencies, \$15,000.

By Mr. Starkweather (H. R. 3823): Appropriating the following sums, for the following fortifications and other works of defence: For Fort Preble, Portland Harbor, Me., \$10,000; Fort Scammel, Portland Harbor, Me., \$20,000; completing batteries on Gershishe's Island, and at Jerry's Point, Portsmouth Harbor, N. H., \$20,000; battery at Portland Head, \$20,000; Fort Warren, Boston Harbor, Mass., \$25,000; battery at Long Island Head, Boston Harbor, Mass., \$30,000; Fort Adams, R. I., \$15,000; fort on Dutch Island, west entrance to Narragansett Bay, R. I., \$20,000; Fort Trumbull, New London Harbor, Conn., \$20,000; fort on Willet's Point, East River, N. Y., \$25,000; Fort Schuyler, East River, N. Y., \$25,000; Fort Hamilton and additional batteries, New York Harbor, \$10,000; Fort Wadsworth, New York Harbor, \$5,000; fort on the site of Fort Tompkins, Staten Island, \$20,000; Battery Hudson, New York Harbor, \$15,000; battery at Finn's Point, Delaware River, N. J., \$25,000; fort opposite Fort Delaware, \$25,000; Fort Mifflin, Delaware River, Pa., \$25,000; Fort McHenry, Md., \$20,000; Fort Monroe, Va., \$20,000; Fort Moultrie, S. C., \$15,000; Fort Pulaski, Ga., \$25,000; Fort Jefferson, Garden Key, Fla., \$15,000; Fort Jackson, La., \$25,000; Fort Pickens, Fla., \$25,000; Fort Salust Philip, La., \$25,000; Fort Morgan, Mobile Bay, Ala., \$25,000; fort at Fort Point, entrance to San Francisco Harbor, Cal., \$25,000; fort at Lime Point, San Francisco Harbor, Cal., \$20,000; fort on Alcatraz Island, Cal., \$25,000; torpedoes for harbor-defences, and preservation of the same, \$125,000: Provided, That the money herein appropriated for torpedoes shall only be used in the establishment and maintenance of torpedoes to be operated from shore-stations for the destruction of an enemy's vessel approaching the shore or entering the channel and fairways of harbors; contingencies of fortifications, \$75,000; surveys and reconnaissances for sea-coast defences, \$30,000; the total amount recommended by this bill is \$850,000.

By Mr. Nesmith (H. R. 3873): That the proper accounting-officers of the Treasury of the United States be, and are hereby, authorized and directed to allow to J. W. Drew, late additional paymaster U. S. A., in the settlement of his accounts for the months of November and December, 1868, the sum of \$20,319.88 for disbursements made on vouchers lost in transmission.

By Mr. Garfield (H. R. 3860): That the proper accounting-officers of the Treasury Department be, and are hereby, authorized and directed to credit First Lieutenant Henry Jackson, Seventh Cavalry, U. S. A., property and disbursing officer in the Signal-Service, in his account, with the sum of \$1,271.34; being the amount paid by him, to Matt France and George M. Brown, citizens of Colorado



Springa, Colorado Territory, on false vouchers, and to David H. Sackett, sergeant in the Signal-Service, U. S. A., on false receipts presented by him.

The Army Appropriation Bill (H. R. 3820) introduced December 7th, by Mr. Wheeler, from the Committee on Appropriations, appropriates the following sums: For expenses of the Commanding-General's Office, \$5,000. For expenses of recruiting and transportation of recruits, \$105,000; and no money appropriated by this act shall be paid for recruiting the Army beyond the number of twenty-five thousand enlisted men, including Indian scouts and hospital stewards. Nothing, however, in this act shall be construed to diminish the signal service, which shall hereafter be maintained as now organized, under the authority of the Secretary of War. For contingent expenses of the Adjutant-General's Department at the headquarters of military divisions and departments, \$3,000. For the expenses of the signal-service of the Army, purchase, equipment, and repair of electric field-telegraphs and signal equipments, \$12,500.

For pay of the Army, and for allowances to officers of the Army for transportation of themselves and their baggage while travelling on duty without troops, escorts or supplies, and for compensation of witnesses while on court-martial service; for travelling-expenses of pay-masters' clerks; for payment of postage on letters and packages, and cost of telegrams received and sent by officers of the Army on public business, \$11,400,000. Provided, That hereafter only actual travelling-expenses shall be allowed to any person holding employment or appointment under the United States, except marshals of the United States, and their deputies, and all allowances for mileages and transportation in excess of the amount actually paid, except as above excepted, are hereby declared illegal; and no credit shall be allowed to any of the disbursing officers of the United States for payment or allowances in violation of this provision.

For subsistence of regular troops, engineers and Indian scouts, \$2,412,000, not exceeding \$3,000 of which may be used for subsisting Indians visiting military posts: Provided, That \$300,000 of the remaining sum thus appropriated may be applied by the Commissary-General of Subsistence prior to July 1, 1875, to the purchase of subsistence supplies intended for the posts supplied through the Upper Missouri and for other distant posts.

For regular supplies of the Quartermaster's Department, \$4,250,000; for incidental expenses, \$1,200,000. For purchase of horses for the cavalry and artillery, and for the Indian scouts, and for such infantry as may be mounted, \$300,000; for transportation of the Army, \$4,000,000.

For hire of quarters for officers on military duty; hire of quarters for troops; of store-houses for the safe keeping of military stores, offices, and of grounds for camps and summer-cantonments, and for temporary frontier-stations; for the construction of temporary huts and stables; and for repairing public buildings at established posts, \$1,400,000; for construction and repairs of hospitals, \$100,000; for purchase and manufacture of clothing and camp and garrison equipage, and for preserving and repacking stock of clothing and camp and garrison equipage, and materials on hand at the Philadelphia, Jeffersonville, and other depots of the Quartermaster's Department, \$1,450,000; for maintaining and improving national military cemeteries, \$150,000; for Army contingencies not provided for by other estimates, embracing all branches of the military services, \$100,000.

For purchase of medical and hospital supplies, pay of private physicians employed in emergencies, hire of hospital-attendants, expenses of purveying-depots, of medical examining boards, and incidental expenses of the Medical Department, \$200,000; for the Army Museum and for medical and other necessary works for the library of the Surgeon-General's Office, \$10,000; for engineer-depot at Willet's Point, N. Y., \$9,000; for the ordnance service for current and incidental expenses, \$125,000; for manufacture of metallic ammunition for small arms, \$75,000; for overhauling, cleaning and preserving new ordnance-stores on hand at the arsenals, \$50,000; for repairing ordnance and ordnance-stores in the hands of troops and for issue at the arsenals and depots, \$25,000; for saddlers' tools, etc., for the cavalry-service, \$20,000; for purchase and manufacture of ordnance-stores, to fill requisitions of troops, and for alteration of carriages now in use in sea-coast forts, \$100,000; for infantry, cavalry and artillery equipments, and for repairing horse equipments, \$100,000; for manufacture at national armories of the new model breech loading musket and carbine, adopted for the military service on recommendation of the board of officers convened under act of June 6th, 1872, \$100,000; Provided, That hereafter no money shall be expended at said armories in the perfection of patentable inventions in the manufacture of arms by officers of the Army otherwise compensated for their services by the United States. The total sum recommended by this bill is \$27,701,500.

A NAVAL General Court-martial convened at the Brooklyn Navy-yard, on the 21st instant, for the trial of enlisted persons against whom charges have been preferred. The following is the detail of the Court: Captain J. B. Creighton, Commanders M. Haxton, E. P. McCrea, and Wm. Whitehead, Lieutenant Wallace Graham, and Second Lieutenant A. H. O'Brien, of the Marine Corps as judge-advocate. A similar court meets at the Mare Island Navy-yard, on the 28th of December, composed of Captain Thos. Pattison, Lieutenants R. M. Cutts, W. Gardner and Duncan Kennedy, and Passed Assistant Paymaster H. G. Colby—the latter as judge-advocate.

## THE NAVY.

The Editor invites for this department of the JOURNAL all facts of interest to the Navy, especially such as relate to the movement of officers or vessels.

### VARIOUS NAVAL ITEMS.

THE orders for the *Powhatan* have been so far modified that she will take her departure from Norfolk early in January for Lisbon, instead of going to New York.

THE *Phlox*, steam tender to the Naval Academy, being much in need of repairs, will shortly be sent to Baltimore for that purpose. She has been running over ten years without a thorough overhauling.

THE *Portsmouth*, now at San Francisco, is soon to proceed on a cruise along the coast of Mexico and Central America. On her return she will examine into certain reported dangers in the Pacific.

THE *Canandaigua*, now at New Orleans, will be sent to Aspinwall for the purpose of affording facilities to the surveying party under Lieutenant Collins, who are to make further explorations of the Darien Canal route.

LIEUTENANTS FREDERICK COLLINS, J. T. Sullivan, and J. G. Eaton, and Assistant Surgeon J. F. Bransford will leave New York in the Pacific Mail Steamer of the 2d January next for Aspinwall, for duty connected with the Survey of the Isthmus of Darien.

A BOARD of officers of the Medical Corps of the Navy, composed of Medical Directors Joseph Wilson and H. O. Mayo, and Surgeon J. R. Fryon, assembled at the Pensacola Navy-yard, on the 22d instant, to investigate the circumstances connected with the recent visitation of yellow fever at the yard. In addition to determining, if possible, the origin of the disease the board will recommend measures for guarding against it in future and promoting the health of the station.

In pursuance of a Resolution of the House of Representatives passed on the 13th of April, 1874, the Secretary of the Navy has appointed a board of officers to inquire into the expediency of establishing a coaling station at the harbor of St. Mary's river, Maryland. The board is composed of Commodores R. H. Wyman and J. M. B. Clitz, and Engineer-in-Chief W. W. Wood, and their report when made is to be submitted to the House at its present session. The facilities that will be afforded by the Washington and Point Lookout Railroad, it is claimed will make it quite advantageous to establish a coaling station for the Navy at St. Mary's.

DESPATCHES have been received by the Navy Department from the *Monongahela*, dated at Cape Town, October 30th. She arrived there the day previous, 29 days from Rio de Janeiro. The route taken was south of the parallel of 40 deg. The voyage west of the meridian of Greenwich was characterized by strong winds and heavy seas, with almost weekly recurring "circular storms," of comparatively small diameter, but blowing at times with great violence, and causing a heavy cross sea, making it necessary to heave the ship to occasionally until the sea had subsided. After passing that meridian and hauling up northerly for port, the weather changed, and calm and light airs prevailed during the remainder of the passage. The *Monongahela* required some caulking on the decks, and expected to get to sea again by the 15th of November, in ample time to carry out her instructions. National salutes were exchanged at Cape Town, and the ship was visited by Mr. Edgcomb, the United States Consul. The officers and the crew were in good health. No information had at that time been received of the failure of the *Savotara* to land her party at Crozet, and so the *Mervin* expected to sail for that point, reaching there about the first of December, thence to Kerguelen land and return to Cape Town.

THE San Francisco *Bulletin* of November 23d, says: The United States steamship *Narragansett*, which passed out of the Golden Gate on Thursday afternoon on an experimental cruise in deep-sea soundings, returned on Saturday. At 9 A. M., Friday, November 20th, all preparations having been made, the *Narragansett* was brought head to sea, at a point 76 miles nearly due West of the Farallon light-house, wind light from N. N. E. and a moderate swell from N. W. The ship was kept in this position by use of the engine and head sails, so at no time during the experiment was the line deflected more than ten degrees from the perpendicular. The heavy shot weighing 68 lbs. specimen cup, and Casella thermometer were attached to 25 fathoms of "Albacore" line, which is used to prevent fouling, and lowered steadily into the water until the strain came upon the wire, when they were let go on their scientific errand to the bottom of the ocean, which was reached at the depth of 2,129 fathoms in 26 minutes and 41 seconds. The drum containing the wire was then connected with a large balance-wheel by means of an endless band, and this great length of line was recovered in 33 minutes and 24 seconds. Temperature of the bottom registered by the Casella maximum and minimum thermometer was 34 degrees, which agrees with the results of previous experiments. The specimen-cup brought up a quantity of green ooze, which on being submitted to microscopical examination, was found to be composed of diatomacea and their debris. The result of the experiment was perfectly satisfactory, but at 1 P. M. another cast was taken, at a point twelve miles nearer the South Farallon light-house, in 1,993 fathoms, when everything again worked to perfection. The *Narragansett* has been on special service surveying the coast of Lower California, and of Mexico, as far South as Cape Corrientes, since June, 1873, and has done an amount of work which can only be appreciated by navigators of that hitherto almost unknown coast.

The survey of the coast and adjacent islands has already been completed and the ship has been at Mare Island for several months undergoing extensive repairs. She is now in good order and will soon return to her old working ground to run lines off and on shore, to determine the continental outline, thus furnishing information long required by scientific men, and giving the navigator the means of determining his approximate position in thick, foggy weather. The following is a list of the officers of the *Narragansett*: Commander George Dewey, commanding; Lieutenant George C. Reiter, Executive-Officer; Lieutenant Charles Seymour, Navigator; Masters, U. R. Harris, W. P. Conway and Frank Winslow; Midshipmen Charles J. Badger and Alfred Reynolds; Past Assistant Engineer, James Butterworth; Assistant Paymaster, W. C. McGowan; Assistant Surgeon, Thomas H. Streets; Assistant Engineer, W. H. Nauman; Boatswain, Thomas Savage; Carpenter, Philip S. Craig; Captain's Clerk, Samuel Sprigg; Paymaster's Clerk, D. Moreau; Draughtsmen, W. F. Beardslee and H. M. Bayer; Astronomer, Lieutenant Joseph E. Craig.

### LIEUTENANT W. B. CUSHING, U. S. N.

LIEUTENANT-COMMANDER WILLIAM B. CUSHING, U. S. N., died on the 17th, at the Government Insane Hospital, near Washington. He had for some time previously to the loss of his mind suffered from sciatica in a very severe and painful form, and derangement was traced to that as the immediate cause. For weeks before his removal to the hospital, he gave evidence of the loss of the balance of his faculties, and soon after reaching the institution, appetite and strength declining together, he gradually sank into the arms of death. It is the sad and tragic ending of one of the most brilliant careers ever run in either service. We can best describe his naval exploits in the language of a recent article in *Harper's Magazine* (July, 1874). Regarding his first services during the war, this article says:

Midshipman Cushing sailed from Boston in the frigate *Minnesota*, and reached Hampton Roads in May, 1861—a lad then scarcely 17 years old, but fully determined upon playing a great part in the great events to come. The *Cumberland*, the *Quaker City*, and the *Monticello*, men-of-war, all lay in the roads, and the latter of them, which has the honor of having been the first ship under fire in the Rebellion, young Cushing subsequently commanded. The fleet had not been at anchor a single day when five schooners, loaded with tobacco, were captured; and that night the young midshipman took into port the *Delaware Farmer*, the first prize of the war.

His gallantry during the operations against Fort Fisher is thus described:

Directly upon his promotion the young hero took command of the flagship *Malvern*, bearing the broad pennant of the rear-admiral, and in December was part of the force operating against Fort Fisher. Here Commander Cushing performed what, with the exception of the *Albemarle* affair, was in reality the most dangerous exploit in all his term of service, and one requiring a more steady courage, being nothing less than the buoying of a channel in an open skiff—a skiff rivaling the famous little boat of the battle of Lake Erie—in the midst of a shower of round shot, shell, and shrapnel, the work continuing for six hours, the skiff frequently half filled with water by the plunging shot, and its companion being sunk.

During the brief cessation of more active operations against the Wilmington forts, Commander Cushing offered battle to the *Chickamauga*, a rebel privateer carrying an extra crew; but, the challenge being declined, he drove a large blockade-runner ashore under her nose and returned to the fleet, which on the 12th of January resumed the attack upon the forts, the ships being 60 in number, comprising iron-clads, frigates, sloops-of-war, and gunboats. An assault being ordered after a three days' bombardment, Commander Cushing, with other officers, accompanied the force of sailors and marines about to storm the sea-front of Fort Fisher. Marching to within a few hundred yards of the embrasures, the entire body threw themselves down under the slope of the beach, waiting for the signal of attack, the whole fire of the Navy passing with a deafening noise just over their heads. Springing to their feet at the word of command, they moved forward steadily over the soft white sand, which the sunshine made dazzling, and the relief of which rendered every officer in his uniform of blue and gold lace—and, indeed, every man—a conspicuous target, the rebels meanwhile pouring forth an unceasing fire that cut down their foes in windrows. Finding himself alone at last, just after reaching the palisades, Commander Cushing turned to rally his men, and was obliged to cross a hundred yards of the bare sand with the bullets pattering about him in such wise that it seems as if he must have borne a charmed life. Most of the ranking officers were either dead or badly wounded by that time, or else remaining under shelter of the palisades till nightfall—more fortunate than their comrades, who, dropping on the beach, were swept out to sea by the rising and falling tide—he therefore assumed the command himself, and gathering some hundreds of men with great effort, he was again proceeding to the assault when requested to relieve with them a regiment which went to the assistance of the army on the other side, which was operating to such effect under the gallant General Ames that before midnight the works had surrendered.

The *Albemarle*, as it has been mentioned, was an iron-clad of tremendous strength, which had already defeated the whole Federal fleet, sunk the *Southfield*, exploded the boiler of the *Sassacus*, engaged nine foes at once without danger to herself, forced the surrender of a brigade, and the abandonment of the whole region of the Roanoke by the Federal forces. The Government having no iron clads capable of crossing Hatteras bar and encountering her, all its operations in that sec-



tion were rendered practically useless by the *Albemarle's* presence there, and the expense of the squadron necessary to keep watch upon her movements was something enormous. In this emergency Lieutenant Cushing submitted two plans to Admiral Lee for the ram's destruction. The admiral approved of one of them, and sent its projector to Washington to lay it before the Secretary of the Navy, and the latter, though at first a little doubtful of its merits, finally authorized him to procure the means to carry it into execution; and he immediately purchased in New York two open launches, each about 30 feet long, fitted with a small engine and propelled by a screw, carrying a howitzer, and provided with a long boom that swung by a hinge, which could be raised or lowered at will, and which had a torpedo in the groove at its further extremity. These boats were taken down through the canals to the Chesapeake, one of them being lost on the way, and the other reaching the sounds at last through cuts and creeks and an infinitude of toils, hindrances, and ruses. Joining the fleet, which lay at the mouth of the river, the lieutenant disclosed his object to his men, assuring them that they not only must not expect, but they must not hope to return, for death was almost inevitable, and then called for volunteers. They all stood by him, and six others presently joined them—Assistant Paymaster Frank Swan and Mr. Howarth, who had often accompanied him on his most reckless adventures, being of the number. The *Albemarle* lay moored at the Plymouth wharf, eight miles up the river, both banks of which were lined with batteries and held by several thousand soldiers, while, at some distance up, that portion of the wreck of the *Southfield* which still lay above water was occupied by a picket-guard, whose duty it was to throw up rockets on the first alarm, for, unknown to the attacking party, rumor of the intended endeavor had in some mysterious way already reached the Plymouth authorities, and every provision had been made for their reception. However, on the night of the 27th of October the little launch entered the Roanoke River, her engine at low pressure, to make the least noise possible, left behind all obstructions, passed within thirty feet of the unsuspecting picket on the *Southfield*, and approached the wharf where the ram lay, a vast black mass in the darkness. Greatly emboldened by this success, the lieutenant for a moment resolved to change his plan, and, knowing the town perfectly, to put in shore and trust to the effect of a night surprise, with which he was so well acquainted, overpower those on board, get her into the stream before the forts could be aroused, and fight the batteries with her on her way down. But just as he was about to carry his sudden plan into execution, a cry from the ram rang out sharply on the night, repeated on every side, followed by the instantaneous booming of the great guns from ship and shore; and returning no answer, the Lieutenant put on all steam and made for her. At the same moment an immense bonfire of pine knots and turpentine blazed up on the bank, most fortunately for him, since it revealed directly the untoward fact that a boom of logs extended around the ram in all directions to guard her from torpedoes, which for one second seemed an insurmountable obstacle. Only for one second, though. With the next the lieutenant had given orders to sheer off across the stream, so as to get room for acquiring headway and carrying his launch by the force of its own impetus straight across the boom, though it never could get out again, he knew. As they turned, a volley of buckshot tore away the whole back of his coat and the sole of his shoe, and the man by his side fell lifeless. Before the volley could be repeated the launch had struck the boom, was over, and was forging up under the *Albemarle's* quarter, directly beneath the mouth of a rifle-gun, and so close that the merest whisper on board the ram, where they were endeavoring to bring the gun to bear, could be distinctly heard.

That must have been a terrifically exciting moment to those on that little launch, with the vast mountain of iron towering above them, the fire-lit mass of foes upon the shore, and triumph and eternity in the next moment. Lieutenant Cushing stood at the bows of the launch, with several lines before him; one of these lines was attached to the howitzer, one to the ankle of the engineer, one to the officer who was to lower the boom carrying the torpedo, one was that by means of which the torpedo was to be slid under the ram, another was the exploding-line, which should pull away a pin and let a grape-shot drop on the percussion-cap beneath. The howitzer had already been discharged. The line attached to the engineer was pulled; the engine stopped. The boom was lowered, the torpedo slid slowly off and under, the air-chamber at top bringing it up in position beneath the ram. The last line was pulled, the grape-shot fell, just as the rifle-gun went off—and the rebel ram and the launch blew up together, and columns of water shot up and fell again, heavy with dead and dying. But just as Lieutenant Cushing pulled the exploding line he cried out to his men to save themselves, and throwing off arms and heavy garments, had struck out into the water.

Amid a scene of great tumult Lieutenant Cushing succeeded in reaching the shore, whence, travelling through the swamps, he came to a creek, where he seized a Confederate boat, and by 11 o'clock the next night had made his way out to the steamer *Valley City*. The gallant officer received for this daring feat a vote of thanks from Congress, and a complimentary letter from the Secretary of the Navy.

THE semi-official *Carlsruhe Gazette* learns that a lively correspondence is in progress between Continental Cabinets relative to the Russian proposal for the resumption of the Brussels Conference on the usages of war. The *North German Gazette* is enabled to state that the majority of governments represented at Brussels have shown a hearty disposition to support the Czar in the realization of his humane idea.

## THE NATIONAL GUARD.

ARSENAL DRILLS NEXT WEEK.—Monday, 28th, Eighth regiment; Tuesday, 29th, Sixty-ninth regiment.

JANUARY.—Friday, 8th, Seventy-first regiment; Monday, 11th, Sixty-ninth regiment; Wednesday, 13th, Eighth regiment; Thursday, 14th, Battery K, First division; Monday, 18th, Seventy-first regiment; Wednesday, 20th, Seventy-ninth regiment; Thursday, 21st, Eighth regiment; Monday, 25th, Sixty-ninth regiment; Tuesday, 26th, Fifty-fifth regiment; Wednesday, 27th, Twelfth regiment; Thursday, 28th, Eighth regiment.

GENERAL SHALER.—The Chicago "Times" of December 16 says of this officer: "General Shaler is proving himself a very industrious and energetic 'suggestor.' He has already laid before the Board of Police three voluminous reports on the reorganization of the Fire Department, and given the commissioners more matter for thought than they will be able to digest in many months."

The Fire Department of the city of Chicago has proved perfectly tractable to him, and adopted all his suggestions so far, having officially resolved "that the plan of reorganization for the Chicago Fire Department, submitted by General Alexander Shaler, consulting engineer to the board, meets with our cordial endorsement, that in accordance therewith the fire marshal be authorized and instructed to promulgate this order, and carry out such details embodied in the recommendations of the consulting engineer to the board as are practicable under existing laws and ordinances, and that the consulting engineer to the board be requested to confer and advise with the fire marshal for that purpose." We give this comforting information for the benefit of those to whom General Shaler is now "though lost to sight to memory dear." The general has returned to New York for the holidays, however.

ARMY RIFLE PRACTICE.—From Captain McGowan, commanding Company D, Twelfth U. S. Infantry, we receive the following record of target practice of his company, firing ten rounds per man, at 100 yards, during December 7, 1874. It appears that his first team of fourteen men made 9 bull's-eyes, 64 centers, 58 outers, 9 misses, 344 total.

The second team of thirteen men made 8 bull's-eyes, 41 centers, 70 outers, 11 misses, 295 total.

The third team of thirteen men made 6 bull's-eyes, 32 centers, 56 outers, 36 misses, 232 total.

The whole company made 23 bull's-eyes, 137 centres, 184 outers, 56 misses, 871 total.

NOTE.—"Borders" counted as misses at Creedmoor, take off 24 misses in reality, but are not allowed here. The best shot's name is Arnold.

The same officer also sends us the following communication which we print with pride and pleasure. We trust that we may have many such officers as Captain McGowan in our Regular Army. Were there only one such in each company our Regulars would not long suffer reproach.

Captain McGowan writes: "In your edition of November 28 in an editorial you make the following statements: 'And the dregs of the population in each country are too often among the men who enlist in the Regular Army.' Again: 'All foreign observers and civilians at home unite in describing the rank and file of our own and the English armies as generally the very scum of society.' Again: 'It may well be asked if it is not time to alter our system of recruiting, instead of abusing the men for being a bad lot.' On this the captain remarks, 'That the very dregs and scum of society too often are enlisted, there is no use in denying; but, like water, they soon find their level in a military prison or by desertion. Such men we do not call soldiers but bummers. Your article is apt to give a wrong impression to the rank and file of the Army, as holding up too prominently the bad element, and only incidentally hinting that there are some good men in the Army. I have a company of forty men, and not one bad one among them. Since January 1 but two men have been sent to the guard-house, and then only for a simple drunk, not noisy or quarrelsome. They are all obedient and willing. I am proud of my company. There are none of the dregs and scum of society in it, all such characters having deserted, and if any of them are ever apprehended I hope they will never be returned to it. Your article was a heavy leader on the bad element. Can you not give the good men of the Regular Army an article in your columns as prominent as they deserve? If you cannot do it for the Army, just leave Company D, Twelfth U. S. Infantry, out of the 'dregs and scum of society,' as they will compare favorably in intelligence and behavior with any class of society, even though they are enlisted men. Ours is an honorable profession. The Independent Order of Good Templars in this town, near Camp Independence, California, could not get along without us. Fifty per cent. of my company are members in good standing."

ED.—We intended to refer more fully to this letter in time. For the present let us say that it gratifies us very much to be able to place it here before the eyes of the National Guard, who are as apt to undervalue the Regulars, morally and socially, as the latter are with almost equal certainty to undervalue the militia professionally.

COMPANY H, SEVENTH INFANTRY.—This command assembled at the arsenal on Friday evening, the 18th inst., for drill, with a front of twenty-four files. The movements consisted for the most part in marching in fours; right and left front into line, in common and double time; right and left oblique; forming of single rank and reforming again to double; marching by company and platoon front, etc. The marching was done for the greater part of the time with that exactitude for which the Seventh is famous. The wheelings and forming of lines were also well done in the main, only one very noticeable error taking place, and that by a misapprehension of the order. The poorest movement was breaking by file from column of fours. This a more difficult movement for exactitude than one would imagine. The evolutions which were least perfectly done were all of the more difficult kind, such as the backward march in line in single rank. Towards the end of the drill a few moments were spent in drilling in the manual. This drill may be called a very profitable one, and Captain Casey seems to be a thorough instructor. Our reporter, was somewhat surprised, however, at the drill in question on hearing one of the lieutenants was equally inevitable with "oblique." Would it not be well to have some mutual concession for the sake of uniformity, and have this word pronounced the same way on drill by all the officers, even though there be a difference of opinion among these gentlemen as to its proper sound? We should feel inclined to expect this, at all events in the Seventh regiment, where uniformity and precision is so highly valued.

EIGHTH INFANTRY.—This command held a battalion drill at the arsenal on Wednesday evening, the 16th inst. The line was formed as for dress parade, at 8:30, with ten companies of eight file front. In the course of the ceremony the captain of the left company instead of "parade rest" gave the command, "In place rest." The drill itself was in the main creditable, and consisted principally in deployment of columns of fours, companies, and divisions, into

line; marching in line; close column by division; and double column. The company commander on the left gave the wrong commands, both as company and division commander, two or three times, being corrected by Colonel Scott; the most noticeable being that in forming line from column of companies, he ordered "side step to the right" in place of "right dress." The forming of close column by division was less correctly and steadily executed than the others; but the marching in line was good, and wheeling into line was made in a number of cases with precision, and little or no loss of distance. The drill was performed in fatigue uniform and was private, there being hardly any spectators.

AMERICAN RIFLE ASSOCIATION.—This body will hold its second prize meeting at the Mount Vernon range on Christmas Day, with three matches at least, and five probably. All members of National Guard of any State are invited by the Association to participate in the Military Match, which is open only to National Guardsmen in uniform, with bona fide military rifle. Shooting commences at 10 A. M. Trains run to Mount Vernon and West Mount Vernon respectively, on the New Haven or Harlem roads, every half hour, and excursion tickets will cost sixty-five cents. A stage for the range will visit every train. Return trains till 7:28 P. M. Time, forty minutes.

All the shooting will be at 200 yards, standing, Creedmoor rules. The targets are the new Wimbledon style, forty inches square, with white circle, black bull's-eye and corners. Hits in corners counted as misses. The count will be as at Wimbledon, bull's-eye 5, centre 4, inner 3, outer 2. The principal matches are as follows:

I. Military Match, open to National Guardsmen, military rifles, competitors in uniform, 200 yards, standing; entry, fifty cents.

II. Allcomers' Match, any rifle within Creedmoor rules, 200 yards, standing; entry, for members fifty cents, all others one dollar.

III. Ladies' Match, any rifle, 200 yards, standing; entry, one dollar; name of lady and champion to be entered.

Entries may be made at range till 3 P. M. If the shooting is not finished at sunset, the matches will be concluded on Saturday or New Year's Day, at discretion of the Executive Committee. The prizes amount to several hundred dollars, and will be on exhibition at Mount Vernon. The officers of the Association for 1875 are: President, Colonel John T. Underhill, Twenty-seventh regiment, N. G. S. N. Y.; Vice-President, Brevet Captain Frederick Whitaker, late of Sixth New York Veteran Cavalry; Secretary, Major G. W. Starr, late of First brigade staff, N. G. S. N. Y.; Treasurer, Dr. Alfred Starr, late of Seventy-first regiment, N. G. S. N. Y.; Directors, Lieutenant-Colonel Henry Huss, Major George G. Dewitt, Captains Coburn and Chatfield, all of Twenty-seventh regiment, N. G. S. N. Y., Lieutenant-Colonel Hon. C. M. Schieffelin, late of Sixth regiment, N. G. S. N. Y.; and member for Eastchester Hon. Theodore Pine, Register of Westchester county; Edward Gay, Esq., the well known artist, and Doctors Gill and Peck of Mount Vernon. The Association has adopted a handsome blue ribbon badge for yearly member's ticket, and has adopted a low scale of prices for membership, no entrance fee, two dollars annual dues, National Guardsmen half price. For short range practice during the coming year, the Mount Vernon range possesses many advantages, especially during the winter, being warm and sheltered.

SEVENTY-FIRST INFANTRY.—The "Light Guard," Company A, of this regiment, gave a very enjoyable reception on Friday evening last, at the fine pavilion, formerly known as Terrace Garden, in Fifty-eighth street. For some reason best known to the reception committee, the invitation cards bore the address, "Lexington Avenue Opera House," thereby causing much doubt and speculation on the part of the uninitiated, some of whom were ready to believe that the regiment which has created such a sensation by its new bearings, was about to astonish the public again by the construction of a special new opera house for that evening. Those who were disappointed in this were obliged to admit that the regiment, with all its wealth and good taste, could hardly have provided a suite of rooms more elegant and better adapted to the entertainment of its numerous guests. The grand salon, surrounded with mirrors and crimson drapery, was brilliantly lighted; the floor was as hard and slippery as adamant, and the regimental orchestra, stationed on the stage, with a tasteful background, played the choice productions of Strauss, Weber, and Gungl with a spirit and enthusiasm which were communicated to the dancers. About three thousand invitations were given out, fully one-half of which were accepted. The guests were mostly in evening dress, in spite of the request that military guests should appear in uniform. We saw many representatives, however, from the Seventh, Ninth, Twenty-second, and other prominent regiments, and several staff officers in uniform, including General Dunn and Inspector-General Morris of the staff of the retiring Governor. We have rarely attended an entertainment at which we found so elegant a company and such perfect taste and system in the arrangements. Not a little credit is due to the members of the regiment for their self-denial in appearing in public the entire evening without their bearings, well knowing the feelings of bitter envy such an exhibition would excite.

COMPANY G, SEVENTH INFANTRY.—This company drilled at the arsenal on Monday evening, 21st inst., Captain George W. Ely being in command. The roll was called promptly at 8 o'clock, and a front of sixteen files was presented to the captain. The drill consisted of a number of movements—platoon manoeuvres being the principal ones. While marching in column of fours the company did exceedingly well, the whole company moving and stopping as one man, but we must confess to a feeling of disappointment at the execution of some other movements, such as wheeling by company, and marching by company front. In the former movement the company was bent and crooked more than once, at the first part of the drill; and at other times there was a loss of distance by which a gap was made in the centre of the company. The deviation from a straight company front was caused by too much crowding, which the men did their best to resist, and when ordered into the column of fours there seemed to be instant relief from the pressure. The captain several times during the drill formed company by wheeling platoons into line, which seemed to be a new movement to the men, as the first time it was done a mistake occurred, by which the two platoons came nearly forming the letter T. One or two other errors were made, both in the platoon formations; but the drill as a whole was a good one, the men giving their whole attention, and each succeeding trial of any particular thing being better than the previous ones. The manual throughout the drill, with one exception, was well done.

It is a noticeable fact in the Seventh as in all other militia regiments, the stronger the company the better the drill, as a rule. Company G is not nearly as strong as it ought to be in the Seventh; and the less perfect drill, in wheelings, etc., seems to follow the smaller numbers, as a matter of course. There ought to be no pressure in wheeling, and there would be none, if the men observed and the captain enforced the golden rule. LOOK TO THE MARCHING FLANK; FEEL TO THE PIVOT. Any company that neglects this cannot help coming to grief in wheelings.



**THE CODE AND THE STAFF.**—The new State staff may now be said to be pretty surely appointed, and it's chief is our old friend, General Franklin Townsend, who has already filled the station in past times, with general satisfaction to the National Guard, for his courtesy and attention to duty. General Woodward, of the Brooklyn division, will confer an honor on the position of inspector general, by accepting its duties, even with the nominal loss of grade implied in the change. The Ordnance Department will in all probability be filled by General Bartlett, a gentleman of long connection with the National Guard. The name of Lieutenant-Colonel C. M. Schiefflin, member elect for the town of Eastchester, and that of Colonel Cullen, have been mentioned for chief of engineers, but nothing certain has transpired as yet. Governor Tilden has kept his counsel on the subject with more circumspection than most Governors elect.

As is the chief, so will probably be the staff, and General Townsend will give a certain decided bias to the National Guard under his administration as he has in the past. Whether that bias be ideally good or bad, there is little doubt that the tone of the National Guard has exhibited improvement from General Townsend's administration, and that many National Guardsmen regard him as an ideal adjutant-general. Under the code, such as it is, prepared under his auspices, some regiments have done well, others poorly. The experience of years has pointed out some very serious defects therein, and we doubt not that General Townsend will be the first to propose remedies therefor. We have often spoken very severely of the Military Code, as very unfit for military purposes, stiff, inflexible, and by no means conducive to discipline. And yet, when all is said, it must be admitted that it was greatly superior to the heterogeneous jumble of laws which it superseded. The Code, with all its faults, has served one purpose, to take the National Guard through a period of pupillage, to show the officers what is wanted, and to prepare them for a better state of things. That it is perfect, none but a few old fogies believe. Every colonel who has ever tried to turn a poor regiment into a good one, every captain who has tried to secure a large attendance and good drill in his company, has found occasion to curse the Code, for the utter helplessness to which it has frequently reduced him. The only regiments with which it has worked well are either the first class city regiments, in which the rank and file are men of education and property, anxious only to learn the full extent of a soldier's duty, or those where the colonel and officers are men of very pronounced executive ability. The last class succeed only by going outside of the Code and overruling their men by positive moral ascendancy, taking advantage of the latter's ignorance of law. Now, there is no question that this state of things is pernicious. The weakness of the Code is that it supposes all the National Guard to be composed of first class material, which is wholly fallacious. The only State in which a similar system is successful is in Connecticut. The Code of that State is largely adapted from our own, but with certain vital differences. It is less than one-third the size, it provides for variable examination of officers to any grade, and it provides uniforms and pay for all the men. Instead of a nominal eight divisions, the State prefers to spend her money on one real brigade and she has it. New York Legislatures seem to be unable to open their hearts to supply more than \$200,000 a year for military purposes, and the Code tries to spread this over 20,000 men. Connecticut's \$70,000 goes to only 2,000 men, and pays them well. To support our present force in real efficiency, needs at least \$700,000, and then the staff should be reduced to two divisions, placed according to the strategic lines of the State. Either the uniforms should be owned by the State or the man. At present they are neither, and the result is, confusion and injustice. If a true Military Code is impossible, at least let not the Empire State of New York be shamed by little Connecticut. A single corps of three divisions, ready for field service and taught field duty by a yearly camp of each division, or still better a corps camp, with autumn manoeuvres, can be supported for a million dollars. If New York leads in a good direction, other States will follow, and the Union may have a real militia, superior to any we have ever seen. If General Townsend and Governor Tilden will lead in this direction, they will earn eternal honor, and if the Military Association can help towards that end, it will earn the reputation of being an useful and valuable body, even at the eleventh hour.

#### VARIOUS ITEMS.

—SERGEANT JOSEPH KLEIN and J. Kaesman have been elected lieutenants of Companies G and H, Thirty-second regiment, respectively.

—NEXT Tuesday an election will be held to fill the vacancy occasioned by the resignation of Captain Fred. J. Karcher, of Company F, Thirty-second regiment.

—MAJOR FRED. KARCHER has come up smiling once more, to the call of time. Somehow he cannot keep away from the Thirty-second any more than from Kreuscher's Separate Troop. He has left the shades of civil life to become adjutant of the Thirty-second. He will eventually end in becoming major-general or some other "ral," we have no doubt whatever.

—THE gentlemen of Ilion, N. Y., on the 18th of December gave, for the second time within a year, a ball to the members of the Spanish commission appointed to inspect the Remington's ordered by Spain. Gilmore's Twenty-second regiment band furnished the music, and every effort was made, and with great success, to so increase the attractions of Ilion that the Spaniards would remain there indefinitely buying and inspecting Remington rifles.

—It is expected that by spring the Howitzer Battery will be mounted. It is proposed to mount every man on horseback, with the exception of two to each gun, who will ride on the limber. Each man is to be armed with a Spencer carbine. One thousand dollars has been appropriated by the State for the hire of horses. The saddles and harness are being made, and will be handsomely mounted. The men are to have a new horse hair plume. Our natty little friend deserves his good fortune, but we should prefer to see all the men mounted or the reverse.

—THE books and records of the headquarters and companies of the several regiments in First brigade, will be inspected by Major Robert Lenox Belknap, brigade inspector, at their respective armories, on the following days: Twenty-second, Monday, Dec. 22, 1874; Sixty-ninth, Tuesday, Jan. 5, 1875; Twelfth, Thursday, Jan. 7, 1875; Seventy-ninth, Tuesday, Jan. 13, 1875; Seventy-first, Thursday, Jan. 14, 1875. Each commencing at 8 o'clock p. m. The Twelfth has a promenade concert on Wednesday, July 30. It is the first regimental concert for some time, and ought to be well attended. The band has a good reputation, the Twelfth has hosts of friends. It can hardly fail of being a grand success. The Twenty-second have a new captain among them, Captain F. having unanimously elected Captain John H. Horsfall for leader. The Second brigade has not come to a brigadier yet. Colonel Villmar is the only really strong candidate. No one else seems to have a chance. The American vote is split all to pieces. What is the use of squabbling like children. Either settle on Villmar and peace, or break up the brigade. It must come to that. The account of the review of the Thirty-second is unavoidably postponed on account of space.

#### NEW JERSEY.

**RIFLE ASSOCIATION.**—A large and enthusiastic meeting was held last evening at Elizabethtown, of the incorporators of the Rifle Association of the State of New Jersey. Captain W. H.

De Hart was called to the chair, and General J. Madison Drake appointed secretary. Captain De Hart gave an elaborate and detailed account of the object and workings of such an association, and pointed out the advantages and necessity of a rifle range in New Jersey, and committees were duly appointed on by-laws, and for the nominations of a Board of Directors. The enthusiasm shown in forming the association assured its success, and another meeting will be held on Jan. 5, when permanent organization will be effected.

#### CONNECTICUT.

**SECOND INFANTRY.**—Company D gave a sociable Wednesday evening, Dec. 16, in honor of their late commandant Major Shaw. During the evening a fine photograph of Major Shaw, life-size, was presented to the company by the ex-members, Ex-Colonel Smith making the presentation speech.

**COMPANY F** gave a novel entertainment Thursday evening, Dec. 17, consisting of a drill in full dress uniform and a short promenade concert, closing with a sociable. The company was drilled in the manual, and company movements by Captain Hendrick. At the close of the drill, Major Barnes presented the company in behalf of the officers and ex-officers, a medal to be known as the officers' medal, to be competed for annually, and to be won by that member making the best score (5 shots each range) at 300 and 500 yards.

#### CALIFORNIA.

**SECOND BRIGADE.**—General Thompson, commander of the First division N. G. C., has issued a circular of remarkable character, in which he gives notice "that the infantry, artillery, and cavalry of the Second brigade, N. G. C., will parade on the 23d of February next for review, inspection, dress parade, and drill (including firing), by brigade, battalion, and battery. Special orders for assembling the brigade will be issued at the proper time. His Excellency the Governor and Commander-in-Chief, and Major-General Schofield, commanding Military Division of the Pacific, with their staff officers, will be present and witness the operations of the day. After the review a thorough inspection of the troops will be made under the supervision of the major-general commanding. To facilitate this work an inspecting officer will be detailed for each company, and as far as possible the inspections will be made by officers of the U. S. Army. Following the inspection, there will be a brigade dress parade of the infantry, and a battalion dress parade of the cavalry and mounted batteries, with such exercises in arms as the commanders may require. In the afternoon there will be evolutions by the infantry brigade, and firing by battalions, companies, rank, file, and at will. The cavalry will exercise with the sabre and pistol, and perform such movements as may be required. The artillery will drill in the school of the battery and co-operate with the other arms in various formations. During the day the troops will be formed in lines of battle, artillery in the intervals, cavalry on the flanks, with skirmishers deployed. Firing by these formations will be practiced. Advanced change of front, charges, and such other movements will be made as time and ground permit. By judicious action and frequent rests the men will not be unnecessarily fatigued. The National Guard may expect a day of work and improvement. Good soldiers are not made by armory drills and passing in review on holidays alone. They should know how to make long marches easily and quickly over any ground; to form, deploy, and change position under any circumstances, to take advantage of natural and artificial covers, to fire steadily and effectively, and to do the greatest damage to the enemy with the least harm to themselves. The U. S. troops in this vicinity will be invited to co-operate with the State forces, and many officers of the Regular Army have kindly volunteered to assist. Any organizations in the National Guard from other brigades, and independent companies of the State will be cordially welcomed, and assigned to active duty. In all parts of the Union the 23d of February is devoted to military parades, and the citizens and soldiery of California can perform no more appropriate duty on that memorable day, than in following the patriotic advice of the Father of his Country, to encourage and maintain a efficient militia, and 'in time of peace prepare for war.'

We doubt if another militia general in the United States would have the pluck to issue such an order as this. It is clear that General Thompson means business, and not play. How some National Guards that we know of would kick, if he were to be made Adjutant-General or Commander-in-Chief in their State. To be put into competition with Regulars, and worked like horses! It is enough to make the ghost of General Sanford rise from his grave, and turn the Old Guard gray in a single night, with the horror of the thought. For our own part, we wish there were five hundred officers of General Thompson's stamp in every State of the Union.

**SECOND INFANTRY.**—From the San Francisco Chronicle of December 7 we learn that the review and inspection of the Second regiment, N. G. C., was presided over by Major-General D. W. Crockett, passed off with great *edat*. The Pavilion was thronged, every seat in the vast auditorium was filled. The announcement that the King of Hawaii attended by his suite, Governor Booth and staff and Major-General Schofield and staff would be present, drew to the scene a large number of those who were desirous of seeing these personages. Invitations had been sent out to all the Army and Navy officers on duty in and around San Francisco, and the number present in full uniform added greatly to the brilliancy of the scene.

The Second regiment, headed by the Fourth U. S. Artillery band, entered the Pavilion shortly after 9 o'clock. The band played the "Mocking Bird" as the battalion in column of fours moved on. Each company wore a distinctive uniform, and while this circumstance detracted from the appearance of the command in a military point of view, it added interest to the scene in a dramatic or theatrical sense. The variegated colors worn, the variety of styles of Army dress presented, and the marked difference between the members of the various companies as shown in the different types of nationality represented in the ranks, gave the battalion a motley look. The blowing of trumpets next heralded the approach of the royal party, entering the floor from the upper end of the hall. They were received with honors, colors saluting, the drums beating, and arms prestead. King Kaiakaka and suite, after acknowledging the salute, proceeded to the seats assigned them in the orchestra stand. General Schofield, Thompson, and Hewston then reviewed the regiment. The regiment next broke into column by companies and marched past the reviewing officers. This movement was well executed, distances being carefully maintained and some admirable wheels being made. After the review the battalion was inspected, staff officers being detailed to this duty. After the inspection a dress parade was held. After the dress parade, Major Thrall presented the prizes for marksmanship to the winners at the last regimental rifle match. A battalion drill was next in order. Major Lake assumed command of the regiment and put the battalion through several movements. The absence of any attempt to equalize the company fronts made this portion of the programme a very sorry spectacle. As no two company organizations wore the same uniform, any attempt to equalize the fronts would have only revealed in a still more glaring light the painful absurdity of a regiment with half a dozen bills of dress. The flanking companies, it is to be regretted, made themselves conspicuous by their utter inattention both during the dress parade and the drill. The right company exhibited very poor discipline, and, though a fine body of men, evidently stand greatly in need of intelligent tactical instruction. During the dress parade their file-closers (officers included) were engaged in earnest conversation, while the men in the rear rank kept wagging their heads round, in order to survey the situation behind them. This company also made some very indifferent wheels, and the men did not seem to know in marching on which side the guide was. The second company, though it presented a good front in marching past in the review, was badly handled during the battalion drill, and once in wheeling into line found more than half its front crowded out. The colors and general guides failed to step the prescribed distance to the front when the battalion was marching in line of battle. Again all the captains erred in bringing their men to a "support arms" immediately after aligning their fronts. This should only be done after successive formations. Another mistake into which all, save the right company fell, was in failing to preserve proper distance between the fours while marching. The rear rank men kept closed up to the front rank men in marching in column of fours, instead of step lengthening the space between them. The star company of the evening was the San Francisco Fusiliers, under command of Captain Cantus. This was the color

company and the third in line. They were dressed in the handsome Prussian uniform presented to them by the Emperor of Prussia. They marched admirably, and their matchless wheels brought down the house several times during the evening. The men were under good discipline, kept their heads up, and moved with praiseworthy precision. They mustered over sixty men, all of whom are well-built, compact-looking fellows. En.—From our contemporary's account it would seem that the California National Guard is hardly out of its swaddling clothes yet, but it is a lusty infant, and will make a fine soldier some day.

#### ANSWERS TO CORRESPONDENTS.

**SUBSCRIBER, Mobile, Ala., October 27, 1874, writes:** Will you please inform me through the columns of your paper whether the *Congressional Globe* is still published in Washington, or whether the name of same has been changed to the *Congressional Record*? **ANSWER.**—It was changed as you surmise.

**CURA, New York, December 16.**—Your letter is not clear as to whether you enlisted in the Regular Army or Volunteers. Tell us the facts plainly, and we can advise you better. You do not send your name, and that is necessary. You need not fear it will be used improperly, but your case is too peculiar for us to answer your question without more information than your letter gives, and especially as to your name and regiment, etc.

**NEWPORT, R. I., December 15.**—Your letter is nothing but a joke, and rather a poor one. We do not care to publish it. Jokes for the JOURNAL require point, and information to be acceptable ought to be genuine.

**SUBSCRIBER, West Point, November 23, writes:** Please inform me in your "Answers to Correspondents" if any enlisted men, candidates for commissions, appeared before the examining board in session in New York. If there were any, I would like to learn their names or the branch to which they belonged. **ANSWER.**—No enlisted men were sent before the board convened in New York city to examine candidates for commissions in the Army.

**SOLDIER, Montana Territory, December 2, asks whether a soldier who has served one five and one three years enlistment is entitled, if he has not re-enlisted in the "limits," to the sixteen dollars a month pay, not meaning the two dollars regular enlistment allowance but the sixteen dollars, deducting one dollar for retained pay, which Congress allows for the fifth year. **ANSWER.**—We think not. The "limits" are designed to secure continuous service, and if the soldier neglects to re-enlist within a certain time he becomes, to all intents, a recruit when he does enlist again.**

**SAM, Pottsville, Pa., December 3, 1874, writes:** Please let me know through the ARMY AND NAVY JOURNAL whether a Congressman can appoint a painter to either of the Naval Squadrons. I can furnish a good recommendation. I would like to see the world. **ANSWER.**—A Congressman can do a good deal, but we fear this transcends his powers. If you want to see the world enlist as a landsman. You may very possibly be detailed on painting duty.

**C. G., Fort Bayard, N. M., November 23, 1874, writes:** I was a re-enlisted man in the U. S. Army, and deserted in 1873; I surrendered myself on the last day of 1873 under provisions of G. O. No. 109, War Department. When my descriptive list was received the re-enlistment was noted therein, consequently I did not receive re-enlistment pay. There is nothing to show that I loose it in Army orders. Being pardoned and restored to duty without trial, I am of the opinion that I am entitled to my former pay. Please answer in JOURNAL. **ANSWER.**—You are entitled to the same pay and allowances since your surrender and pardon as you were entitled to when you deserted. You should make proper application to have your descriptive list amended.

**F. B., Fort Sully, D. T., December 7, 1874, asks:** 1st. Has a soldier who has been tried and convicted of desertion from the service a right to take an oath in court? 2d. Is he serving under oath? 3d. What claim has the service on him, he having broken his oath when he deserted? **ANSWER.**—1st. You do not make the case quite clear if the soldier has suffered for his desertion and if his term of sentence has expired. If so, he is a new man. He can be sworn, but his evidence would be received with caution in the other case. 2d. Partly, and partly under judicious restraint. 3d. The service has a claim on his body if it can catch him and keep him.

**HENRY WILSON, Chicago, Ill., December 13, writes as follows:** 1st. Is there any place in San Francisco, Cal., where a person can enlist in the U. S. Army? 2d. Do you think a young man aged 25 years without any knowledge of the sea or vessel can get a chance to enlist in the Navy? 3d. Is there a recruiting office there for the enlistment of men for the Army? **ANSWER.**—1. Mare Island Navy-yard. 2. Yes, as landsman. 3d. No. There is one in your own city, 33 N. Canal street (see JOURNAL of 28th November last, "Army" heading for other recruiting stations).

**A CORRECTION.**—A correspondent sends us a correction of a previous answer which appeared in the hurry of business. He writes as follows: In the JOURNAL of November 21, "Old Soldier," Fort Totten, D. T., asks: Is it legal for a garrison court-martial to inflict a fine for drunkenness on duty, etc.? In answer you say, "certainly, it is legal. Article 66 of the Articles of War limits the powers of a garrison court-martial to fines of one month's pay and confinement, or hard labor for one month only." In answering "Old Soldier" you have manifestly overlooked the 45th Article, which reads as follows: "Any commissioned officer who shall be found drunk on his guard, party, or other duty shall be cashiered; any non-commissioned officer or soldier so offending shall suffer such corporal punishment as shall be inflicted by the sentence of a court-martial." The penalty for this offence in the case of an enlisted man is here distinctly declared to be an infliction of corporal punishment, which cannot possibly be construed to mean a forfeiture of pay. In his comments on this article the judge-advocate-general says (par. 2, p. 15, Digest of Opinions, 1869): "A sentence of forfeiture of pay for the offence of drunkenness on duty is unauthorized and void; and no less so where the offence instead of being charged under this article, is charged (improperly) as 'conduct to the prejudice of good order and military discipline.'" If the real offence, however, set forth in words, be drunkenness on duty, it can only be punished as authorized by this article. We are indebted to our correspondent for his lucid exposition of the law in this case.

**THE Bavarian Ministry of War is continuing its organisation of the forces under its command upon the Prussian model. The landwehr infantry having been fully organised, the landwehr system is about to be applied to the cavalry and artillery. Moreover, the Ministry has just ordered that during the present winter half-pay and retired officers shall go through a course of instruction in the service of military classes.**

**THE training for war in time of peace is carried on with ceaseless activity in Germany. The last addition which has been made to the military system of that empire with this object in view has been the construction of a railway from Berlin to Zossen, twenty-five miles in length. This line is to serve a double purpose. In the first place, according to a Berlin telegram, it will be used for every species of drill and experiment connected with the construction, destruction and use of railways in time of war, and in the second place, it brings the artillery camp at Zossen within easy reach of the capital.**



### "ONE ROOM AND A KITCHEN."

Perhaps it is grand!  
But I fail to see it,  
To live at a post, as an officer's wife;  
Unless you have rank above a lieutenant,  
'Tis one room and a kitchen  
The rest of your life.

'Tis all very well,  
To flirt with brass-buttons;  
But that's very different from being a wife,  
With children annoying,  
Your comfort destroying,  
In one room and a kitchen,  
To drag out your life.

Now, girls! all take warning,  
In life's early morning;  
Don't marry at least till you're twenty or more;  
Then try for the rank—  
A major or colonel!  
For then you'll be sure  
Of three rooms or four!

I know "Uncle Sam"  
Must be an old bachelor,  
For he made no provision for an officer's wife;  
And the very worst fate  
That I ever can wish him,  
Is one room and a kitchen  
The rest of his life.

PORT SILL.

### FOREIGN ITEMS.

THE calculated expenditure on the Russian army for 1874 is \$120,000,000, and the navy \$15,000,000.

GERMANY has launched her seventh ironclad. Another is to be launched in April, 1875. Twelve armor-clad corvettes of 3,000 tons each for harbor defence purposes are also in course of construction.

A TELEGRAM from Vienna states that considerable sensation has been produced in military circles by some brilliant trials of new Austrian guns in steel and bronze. They proved superior to Krupp's cast steel guns.

MARSHAL MACMAHON, acting on the unanimous opinion of the Council of the Order of the Legion of Honor, has issued an order to the French navy to remind sailors and petty officers who have received the medal of the Legion that this medal cannot be suffered to remain on the breast of a man who disgraces himself by habitual drunkenness.

GERMAN papers report two new inventions in the manufacture of arms, which have been made by Herr Leitherer, of Bamberg, and are now undergoing examination by the military authorities in Bavaria. One is a new breech-loader supposed to exceed all earlier systems in range, velocity, and trueness of shot. The other is a combination of cast steel and bronze in the manufacture of cannon, offering, on the one hand, the advantages of the efficiency of cast steel, combined, on the other, with the economy of bronze. Guns so manufactured are affirmed to be a complete match for cast steel Krupps, whereas their cost little, if at all, exceeds that of bronze cannon.

THE Geographical Society of Paris has recently published a programme of instruction for navigation, for the study of the physical geography of the sea, drawn up by a committee of its members. This programme, which is given to any one who will undertake to make physical observations on board ship, is very elementary; but its shortness and simplicity are its recommendations, and the instructions—if followed out—will furnish a vast amount of observations which the committee of the society purposes to collect, examine, classify, and publish for the benefit of science at large. The instructions relate to the temperature of seas, soundings, currents, floating ice, the properties of sea water, submarine productions, movement of water under the influence of wind, tides, and meteorological observations. The object of the society is excellent; it is, in its own words, to obtain the assistance of all great navigators without interfering with their duties or rendering necessary the employment of costly instruments. The society will also be glad of communications from foreign navigators. It recommends the practice of photography as much as possible on account of its incontestable authenticity. The Minister of Marine has transmitted the programme to all commanders of ships of war, and is about to cause them to be sent to captains of trading vessels. These programmes are reported to have already produced important results, and deserve special attention.

A new compass has been invented in France by M. Duchemin, the magnetic force of which resides, not in a bar or needle, as in the ordinary instrument, but in a flat steel ring, magnetised, with its poles at two opposite extremities of the same diameter. This ring, supported upon an aluminium traverse, pivoted on agate at its centre, has attached to it the ordinary compass card, and acts promptly and efficiently. The author claims for it the following advantages: (1) A magnetic power, double that of a needle whose length is that of the diameter of the ring; (2) two neutral points instead of one, as in the needle; whence it happens that none of the magnetism escapes, and that strong sparks like those from the Holtz machine do not derange the poles; (3) a better and more prompt performance of the compass, the card seeming to float, as it were, in a liquid; (4) a large increase in the sensitiveness of the instrument; (5) the ability to regulate the magnetic intensity of the ring, and thus to compensate for local causes. This is effected by means of a second magnetised steel ring, smaller than, and inside of the first, the position of which—and therefore its neutral-

ising action—may be easily adjusted. Under the direction of the Minister of the Marine, a trial trip of the new compass was made on the steamboat Faon with very satisfactory results. M. Duchemin now proposes as an improvement, the use of a set of such rings, forming a spherical or spheroidal system of still greater magnetic power.

THE English as well as the American papers record the fact that during the progress of an expedition sent by Colonel Gordon from Egypt, by way of Gondokoro, to the court of King M'tese, at a district on the shores of the African lake Victoria, the expedition consisting only of Lieutenant-Colonel Long and two Egyptian soldiers—the little party repulsed an attack from 400 natives, the weapons of the Egyptians being the Remington rifles, and Colonel Long carrying a No. 8 Wiley rifle. This was doubtless the first introduction of the Africans to the "heap shoot" guns made at Ilion. Four members of Gordon's expedition have succumbed to the climate, viz., Anson, Major Campbell, De Witt and Auguste Lenant. Gondokoro is the same place called by Baker Pasha "Ismailia," which gives the title to his book. It is about 140 miles south of Khartoum, which stands at the junction of the Blue and White Nile. Gondokoro was the scene of an abortive mission founded by some Austrian priests, who were finally murdered, or driven off by the Baris and slave traders. M'tese, king of Uganda, was an old friend of Baker Pasha, who preceded Gordon in an effort to put down the slave trade. Baker failed. His men were armed with old smooth-bore muskets, and his only breech-loaders were the clumsy English "Sniders" in the hands of the body-guard nicknamed by him his "Forty Thieves." Moreover, Baker was only nominally a soldier, while Gordon is a general to the backbone. The Gondokoro slave traders have found out the difference between the men and the weapons to their sorrow.

A CORRESPONDENT of the London Times gives some figures as to desertion in the English army which suggest the similar statistics in our own service. "A condition of things exists in relation to our Army at the present moment," he says, "which, were it paralleled in any commercial business or joint-stock company in the United Kingdom, would result in an immediate meeting of indignant shareholders. What can the public think of the following facts? In his report, dated the 1st of January, 1874, the Inspector-General of Recruiting states that in the year 1873 2,078 recruits joined the Household Cavalry and the Cavalry of the Line. From another official source I learn that in the same year 934 deserters from the same arm of the service were advertised for. In like manner, 3,479 recruits joined the Royal Artillery in 1873, and 1,868 were advertised for as 'wanted.' The Royal Engineers had 443 recruits, and 131 were advertised as having deserted; and while 10,760 recruits joined the Foot Guards and the Infantry of the Line, no fewer than 3,569 were advertised for. Nor must the public suppose that this state of things is improving. It is not so, unfortunately, for the hole in the bucket gets wider and wider. I give the following figures, which show that a much larger number of men were advertised for as deserters in the ten months of 1874 ending 31st of October last, than in the corresponding months of the previous year. The numbers from the cavalry in 1873 were 768; this year they are 840; from the artillery in 1873, 1,648; this year, 1,780; from the engineers in 1873, 113; this year, 138; and from the infantry in 1873, 2,565; this year, 2,806. To use the language of the authoritative explanation you published, 'the number of recruits raised each month' would require to be 'much in excess of that in the corresponding months of former years,' else it is evident the bucket at the end of 1874 will prove emptier than ever."

ANOTHER of the series of torpedo experiments against the double iron bottom of the *Oberon* was made on the last Saturday in November at Stokes Bay, near Portsmouth. The mine was charged with 500 lbs. of damp disc gun-cotton, and was placed on the shoal running out from Monckton Fort, at 30 ft. distance from the stem of the vessel on the starboard quarter, its submersion being 48 ft., its horizontal distance from the outer skin of the double bottom being 30 ft.; but, as the *Oberon* draws only 12 ft. the absolute distance of the mine from the double bottom was 52 ft. As the object of this experiment was to compare results with the last the conditions were kept precisely similar, except in one important particular. In the last experiment the mine was suspended from a spar, but on Saturday it rested on the surface of the shoal, so that in the results of this experiment and the last a direct comparison was obtained between the effects of a buoyant and a ground mine. After the mine had been fired the *Oberon* was towed by a couple of government steam-tugs into Portsmouth Harbor, and placed in dock for examination. When the dock had been cleared of water it was seen that the outside of the double bottom had suffered more than in the last experiment, and that the damage was confined within a smaller area. Some of the plates of the outer skin between the longitudinal ribs were bent inward and a little cracked in the line of rivets, and the thin unsupported plate which connects the two sides of the double bottom abaft the stern-post was broken so as to admit water. This fracture was evidently due to

the blow from the explosion of the mine taking effect upon the edge of the plate. The ground mine, therefore, delivered a more direct and concentrated blow upon the *Oberon*, and inflicted greater damage than did the buoyant mine in the last experiment. When the *Oberon* entered the dock it was found that her trim was altered by 16 in. greater depth by the stern and 10 in. less by the head. It would appear, therefore, that but very little water got into the double bottom by way of the fracture. No water got inside the ship, the inner skin of the double bottom being again free from the slightest damage.

### SILVER PRESENTATION GIFTS.

THE Gorham Company, the well known silver-smiths of No. 1 Bond street, New York, offer the richest and largest assortment of choice articles in silver for wedding and presentation gifts and general family use to be found in the country. They were the designers and manufacturers of the ARMY AND NAVY JOURNAL prize cup presented at Creedmoor, and various prizes offered by the National Rifle Association, and the resources of their large establishment enable them to furnish regiments, companies or other organizations, at the shortest notice, with presentation pieces of silver modeled from special designs appropriate to the occasion.

ARMY officers always patronize the best hotels. It is not strange, therefore, that when in Chicago they make their home at the Sherman House. Frank Sherman, the new manager of this hotel, is rapidly adding to its popularity.

IF YOU WANT the best "Elastic Truss" for rupture, or best "Elastic Stockings" for enlarged veins, etc., write to POMEROY & Co., 744 Broadway, N. Y.

### MARRIED.

[Announcements of Marriages FIFTY CENTS each, and the signature and address of the party sending should accompany the notice.]

GORDON-SPENCER.—In Christ Church, Georgetown, D. C., Dec. 17, by Rev. Mr. Williams, Col. GEORGE A. GORDON, Major Fifth Cavalry, to Miss ELIZABETH RINGOLD, daughter of Mr. John Spencer, of Maryland.

LEWIS-PALMER.—At St. Mathew's (Episcopal) Church, Laramie City, W. T., Dec. 1, by the Rev. Mr. Savage, Lieut. H. E. LEWIS, Third U. S. Cavalry, to Miss KATE E., daughter of Gen. I. N. Palmer, U. S. Army.

VAN NESS-MCKNIGHT.—At St. Paul's Church, Milwaukee, Wisconsin, Thursday, Dec. 3d, by the Rev. W. B. Ashley, D.D., Lieutenant W. P. VAN NESS, First Regiment of Artillery, to CARRIE, daughter of Doctor Lewis McKnight, of Milwaukee.

### DIED.

Brief announcements will be inserted under this head without charge. Obituary notices and resolutions should be paid for at the rate of two cents a word, unless it is intended to leave the question of their insertion to the discretion of the Editor.

BISHOP.—At Phoenixville, Penn., Nov. 3, Mrs. CATHERINE BISHOP, in the 61st year of her age, mother of Lieut. JOHN S. Bishop, Thirteenth Infantry.

### OBITUARY.

BURNS.—At Washington, Dec. 7, of consumption, Captain WILLIAM BURNS, U. S. A., (retired), aged thirty-three years. Captain Burns enlisted in Company K, 34th New York Volunteers, June 15, 1861. He was promoted Second Lieutenant Company B, same regiment, December 23, 1863, for gallantry at the battle of White Oak Swamp, in which engagement he lost his left arm. He was appointed Second Lieutenant in the Veteran Reserve Corps May 23, 1863, and promoted First Lieutenant September 7, 1864, for his superior knowledge of military tactics; and was promoted Captain by brevet March 13, 1865, "for gallant and meritorious service at the battle of White Oak Swamp, Virginia," and Major by brevet March 13, 1865, for gallant and meritorious services during the war. Was on special duty at the War Department from November, 1865, to October 20, 1866, and was intrusted with the command of the guard at the time Secretary Stanton refused to vacate the office of Secretary of War on the order of President Johnson. He was appointed First Lieutenant 4th Infantry (Regular Army) July 28, 1866; transferred to 7th Infantry May 27, 1869; brevetted Captain United States Army March 2, 1867. He served with his regiment on the frontiers until December, 1870, when he was placed on the retired list of the Army on account of wounds received in the war. During the past two years Captain Burns has been engaged in the insurance business. He was a man of sterling integrity, and a conscientious Christian. He will leave a better record. He leaves a wife and two small children.

COLONEL C. N. TURNBULL.—Colonel Charles N. Turnbull lately died in Boston, after a short and painful illness. He was graduated at West Point in 1854, and received his commission as lieutenant of engineers. He was at once ordered to join the surveying party in Texas, sent there to establish the boundary line between that State and Mexico. As soon as that important duty was finished he was sent to the Academy at West Point as professor of mathematics. From there he went with Capt. Meade (afterwards General Meade, the hero of Gettysburg) to Detroit on the Lake survey—a most important duty. He was then ordered to Boston in charge of the Light House Department of the East, and built the light-houses on Thatcher Island, known as the Twin Lights. After the breaking out of the war he was for a time on the staff of General Butler as his chief engineer, but was transferred to the Army of the Potomac and intrusted with the important command of the battalion of engineers of the Regular Army. He served through the campaigns of Generals Hooker and Meade, and with General Grant through the Wilderness campaign, and when General Sheridan made his famous raid, went with him as his chief engineer. Whatever he had to do he did well, and General Meade, who knew his worth, offered him, and almost insisted that he should take, the command of a brigade; but Turnbull declined the honor and said he preferred the command of the small but well-disciplined body of men that composed the battalion of engineers. At the close of the war, partly from inducements offered in business, and partly from ill-health contracted in the line of his duty, he resigned his commission and the Army lost a valuable officer. He will be greatly missed in the circle in which he moved. None knew him but to love him. He was a genial companion, strongly attached to his friends and as strongly loved by them. He had the keenest sense of honor, and was incapable of doing a mean action. We deeply sympathize with his bereaved wife and family in their affliction. They have lost an affectionate husband, kind father, and devoted son. He was buried at Mount Auburn, in the tomb with his father-in-law, the late Ebenezer Dole, Esq., whom he had loved so well.